THE

RETROSPECT

OF

PRACTICAL MEDICINE AND SURGERY,

BEING

A HALF-YEARLY JOURNAL,

CONTAINING A RETROSPECTIVE VIEW OF EVERY DISCOVERY AND PRACTICAL IMPROVEMENT IN THE MEDICAL SCIENCES.

EDITED BY

W. BRAITHWAITE,

LECTURER ON OBSTETRIC MEDICINE AT THE LEEDS SCHOOL OF MEDICINE, ETC.

VOL. III. JANUARY—JUNE.

1841.

LONDON:

SIMPKIN, MARSHALL, AND CO.

EDINBURGH: OLIVER AND BOYD. DUBLIN: HODGES AND SMITH.

MDCCCLII.

[THIRD EDITION.]

D. I. ROEBUCK, PRINTER, BANK STREET, LEEDS.

CONTENTS TO VOL. III.

PRACTICAL MEDICINE.

ARTICLE.		AUTHOR.	PAGE.
1	Treatment of Epilepsy	*Dr. Babington*	1
2	Electricity in various Diseases	— *Golding Bird*	3
3	On the Laws which regulate the Deposition of Tubercles	— *Barlow*	10
4	Tinct. Ferri Sesquichlor, in Discharges of Blood from the Urethra	*Charles Clay, Esq.*	16
5	Inspissated Ox-gall in Jaundice	*Dr. Johnson*	18
6	On the Stethoscope with a Flexible Tube ...	— *Golding Bird*	18
7	A few hints on the Treatment of Inflammation	— *Watson*	20
8	Treatment of certain Diseases of the Brain ...	*E. Copeman, Esq.*	22
9	Treatment of Cynanche by Guaiacum ...	*Joseph Bell, Esq.*	25
	Treatment of Rheumatism by Guaiacum ...	*Dr. Seymour.*	26
10	Piperine in Intermittent Fevers	— *Hartle*	26
11	The Use of Croton Oil in certain Nervous Disorders	— *Newbigging*	29
12	Remarks on Blood-letting in Inflammation ...	— *Cragie*	30
13	On Chlorosis	— *Ashwell*	31
14	The Use of Poultices in Inflammations of the Great Cavities	*Sir Francis Smith*	34
15	Salivation from Iodine contrasted with that from Mercury	*Do.*	35
	Secretion of Air from the Surface of the Body	*Do.*	36
16	On the Preparation of the Protiodide of Iron, on the Preservation of the Iodide of Iron, and on the Sesqui-Iodide of Iron	*Messrs. T. & H. Smith*	37
		Dr. A. T. Thomson	39
		M. Oberdoerffer	40
17	The Use of Opium in Acute Internal Inflammations	*Dr. Christison*	40
18	On Hemorrhage	— *Watson*	45
19	Treatment of Variola by Mercurial Applications	— *Oliffe*	49
	Do. Do. by Sulphur	— *Midaveine*	51
	Do. Do. by Gold Leaf	*Baron Larrey*	51
20	Pure Tannin a Remedy for Excessive Perspiration	*Dr. Charvet*	52
21	On the Detection of Albumen in the Urine ...	— *Rees*	53
22	Vacine Crusts, the most effectual Packages for Vaccine Virus	— *Epps and M. Merguera*	55
23	Hydriodate of Potass and Sarsaparilla in Chronic Rheumatism	*Dr. Heggate*	56
24	Treatment of Gouty Concretions with Benzoic Acid...	*Alexander Ure, Esq.*	57
25	Treatment of Acute Rheumatism with Cinchona Bark...	*Dr. D. Davis*	58
26	Treatment of Diarrhœa in Infants	*M. Trousseau*	59
27	Ileus cured by Injection of Air	... ...	59

28	On Functional Derangement of the Heart in Growing Persons	*Dr. Corrigan*	60
29	The Use of Pitch in Piles	*— Wardleworth*	62
30	On Purgatives in Inflammation of the Brain and its Membranes	*— Watson*	62
31	Burnt Rhubarb in Diarrhœa	*F. P. Hoblyn, Esq.*	64
32	Compression of the Carotids in Convulsive Affections	*M. Stroehlin*	64
33	On the Employment of Platinum	*Dr. Hoefer*	65
34	Peculiar mode of giving Mercury in Chronic Hydrocephalus	*— Watson*	66
35	On Seclusion, as employed at Hanwell in the Treatment of the Insane	*— Conolly*	67
36	Neuralgia treated with Acupuncturation ...	*Professor Riberi*	71
37	Treatment of Delirium Tremens	*Dr. Ware*	72
38	The Use of the Gum-elastic Tube in extreme Abdominal Distention	*— Donovan*	73

SURGERY.

39	Practical Remarks on Caustics	*Sir Benj. Brodie*	75
40	New kind of Catheter	*J. C. Foulkes, Esq.*	79
	Ditto ditto	*Dr. Buchanan*	80
41	Dieffenbach's New Operation for the Cure of Stammering	*— Franz*	80
	Operation for Ditto	*Bennet Lucas, Esq.*	84
	Ditto Ditto	*Yearsley & Jas. Braid*	87
42	On the Employment of Threads of Caoutchouc for Sutures	*Thos. Nunneley, Esq.*	87
43	On Strabismus or Squinting	*Thos. Elliot, Esq.*	89
44	On the Excision of Joints	*R. Alcock, Esq.*	96
45	Treatment of Enlarged Bursæ Mucosæ and Synovial Sheaths of Tendons	*Professor Williams*	99
46	Hints on the Treatment of Piles	*B. Cooper, Esq.*	99
47	On the Operation for Talipes...	*James Braid, Esq.*	102
48	Ptosis Cured by Operation	*T. B. Curling, Esq.*	104
	Ditto ditto	*—— Hunt, Esq.*	105
49	On the Eradication of Inverted Eyelashes and on the Preparation of fine Points of Caustic for Ophthalmic and other purposes... ...	*Dr. Hunter*	106
50	Re-Union of a completely separated Portion of Finger	*A. Graham, Esq.*	109
51	Remarks on the Treatment of Hydrocele ...	*B. Cooper, Esq.*	110
52	On Dilatation of the Urethra in Stricture ...	*Dr. Arnott*	111
53	Removal of One of the Bones of the Metacarpus, the Corresponding Finger being preserved	*M. Blandin*	113
54	On the Removal of Foreign Bodies in Joints by Means of Subcutaneous Incisions ..	*Dr. Goyrand*	113
55	Nitrate of Silver, in stopping Hemorrhage after Extraction of Teeth	*C. Ray. Esq.*	114
56	New Mode of Introducing the Catheter in Difficult Cases	*Dr. Paterson*	115
57	On the Changes in the Colour of the Iris produced by Inflammation	*Dr. Hunter*	118
58	Treatment of Swelled Testicle by Compression	*J. Dixon, Esq.*	124

59	Treatment of Un-united Fracture by Compression and Forcible Apposition	*Sir B. Brodie*	125
	Ditto ditto	*Dr. Norris*	126
60	On Congenital Opacity of the Cornea ...	*S. Crompton, Esq.*	128
61	On Baynton's Method of Treating Ulcers ...	*Joseph Bell, Esq.*	129
62	New Operation for Secondary Capsular Cataract	*M. Sichel*	131
63	Mode of Preventing Contraction after Burns	—— *Earle, Esq.*	131
64	Chloride of Zinc in Acute and Chronic Gonorrhœa...	*M. Gaudriot*	132
65	Radical Cure of Varicocele by Invagination and Shortening of the Scrotum	*Dr. Lehmann*	133
66	The Steam Apparatus	*M. Duval*	134
67	Solution of Common Salt as an Eye Lotion in Ophthalmia	*Dr. Hays*	136
68	Treatment of Fissures of the Anus by Rhatany Root	*Prof. Trousseau*	136
69	Suspensory Apparatus in the treatment of Fractures of the Leg	*J. Luke, Esq.*	137
70	Unguentum Æruginis in Burns and Scalds ...	*E. G. S. Gaozey, Esq.*	139
71	Nature and Treatment of Choking	*Dr. Marshall Hall*	140
72	On the Treatment of Deafness	*M. Petrequin*	140
73	Treatment of Gonorrhœa with Cubebs and Alum	*Ditto*	142
74	Aphorisms of Practical Surgery	*M. Dupuytren*	143
75	On the Radical Cure of Herniæ	*Velpeau, Gerdy, &c.*	148

MIDWIFERY.

76	On the Use of the Perforator and Crotchet ...	*Dr. Churchill*	150
77	Treatment of Procidentia Uteri by Suture of the External Labia	*Prof. Geddings*	153
78	Mode of Inducing Premature Labour ...	*Dr. Meissner*	154
79	Nux Vomica, in the Vomiting of Pregnant Women	— *Kroyher*	156
80	On Sanguineous Tumours of the Scalp in New-Born Children	— *Black*	156

ANATOMY, PHYSIOLOGY, AND PATHOLOGY.

81	On the Anatomical Relations of the Blood-vessels of the Mother to those of the Fœtus	*Dr. John Reid*	161
82	On Scrofulous Tubercle of the Brain	— *Hennis Green*	165
83	On the Influence of Artificial Light in causing Impairment of Vision	— *Hunter*	168
84	New Theory of the Sounds of Respiration ...	*M. Beau*	170
85	On Corpora Lutea	*Dr. Robt. Paterson*	171
86	On Vessels in Granulations	*Robert Liston, Esq.*	174
87	Some Remarks on the Motion of the Blood Globules	*W. Addison, Esq.*	176
88	On the Anatomy of the Aponeurosis of the Muscles of the Eye	*M. Bonnet*	178
89	Uses of the Spleen	*D. G. Dermott, Esq.*	179

PRACTICAL MEDICINE,

&c.

Art. 1.—TREATMENT OF EPILEPSY.

By Dr. Babington, F.R.S., &c.

[Dr. Babington states it as his opinion that many cases of epilepsy depend, not on structural, but on functional change, and admit of cure. After relating several interesting cases, accompanied with physiological observations, he proceeds to describe his mode of treatment. It will be seen that sulphate of zinc, as a tonic, is one of his chief remedies: and when he states that the nitrate of silver is perhaps to be preferred, but cannot be persevered in on account of its action on the skin, he might have referred to the *oxide* of silver, which has all the effects of the nitrate, and can be given for any length of time without its bad effects, at least if we may place reliance on the observations of Mr. Lane, which will be found in Retrospect Vol. II, Art. 75, and to which we advise the reader to refer, as placing before him one of our most valuable remedies, in a preparation, which need not be feared. Dr. Babington says, with respect to the treatment of epilepsy:]

Where the irritation, which I suppose to be the proximate cause of epilepsy, is complicated with, and remotely dependent on, organic change of structure, we cannot of course expect that treatment, of whatever kind, will either effect a cure of the disease, or throw any light upon its cause. Again: where it is combined with a state of plethora—never occurring but when the person is in a horizontal position, or after a full meal, and attacking those whose habit is gross and circulation forcible,—means the opposite of those which would be adapted to remove the proximate cause, may be needed. Blood-letting may be necessary, as well as active evacuants, and an antiphlogistic line of treatment; but, with these exceptions, it is my belief that the same class of remedies which is best calculated to give tone to the system under tic doloreux, and other spasmodic states of the nerves of motion and sensation dependent on nervous irritation, is also most applicable to this disease; and that the various preparations of bark, of iron, of arsenic, of silver, or of

zinc, are those from the administration of which we shall derive the greatest advantage. Of the sulphate of zinc, I have lately made more frequent use than of any of the rest; and as it has proved efficacious in some cases, I shall conclude by an allusion to one or two of the most striking. Like all other remedies, it will often fail; but whether useful or not, it has the merit of being a safe remedy, and that when continued for a longer period, and in very much larger doses than is usually supposed. Those large doses seem sometimes, though by no means always essential to its efficacy; and the method of reaching them, without producing nausea, is by a gradual increase, as in the case of emetic tartar. Thus Frances D., to whom I have more than once alluded, was enabled to take thirty-six grains, three times a day, for several weeks, without its producing any sickness or other untoward effect. This in her case was the maximum tonic dose; for when she took forty-two grains, which she continued to do for one week, she lost her appetite, and felt much sickness.

[In another case he gave the zinc till ʒ ss. was taken three times a day, and was then diminished to ten grains to a dose. The fits entirely disappeared from the commencement of the treatment. In other cases he gave two grains three times a day with similar success. He then says:]

It is a general belief, that sulphate of zinc excites less nausea in the form of pill than in a liquid state. I find the difference to be scarcely appreciable; and as it is often desirable to increase the dose to an extent which would make it inconvenient in the form of pills, I frequently prescribe it in solution. It is soluble in two parts and a half of cold water; so that the dose is not inconveniently large, whatever number of grains it may be desirable to administer. I have frequently seen epileptic patients benefited by other tonics; as, for instance, by preparations of iron, by nitrate of silver, and by powdered mug-wort-root. In so intractable a disease we are often obliged to vary our remedy, the principle of treatment remaining the same; yet of all those which I have named, and many more of the same class, I give the preference, on the whole, to the sulphate of zinc. The nitrate of silver is equally, if not more efficacious; but its well-known property of tingeing the skin has always made me averse to its employment.—*Guy's Hospital Reports, April* 1841, *p.* 17.

2.—ELECTRICITY IN VARIOUS DISEASES.

By Dr. Golding Bird, A.M., F.R.S., &c.

["Electricity and galvanism are but different names for the same agent." In the former, the matter being in small quantity, but in a state of "high tension or elasticity," "whilst in that of the galvanic battery we obtain it in enormous quantities, but in a state of low tension." Dr. Bird gives a most lucid explanation of the remedial effects of this active agent in the last number of Guy's Hospital Reports, which we will endeavour to condense. He says:]

When a person is placed on a stool with glass or other non-conducting legs, and connected with the prime conductor of an electrifying machine in action, his whole surface becomes by induction, powerfully electro-positive; and combination, by silent discharge, continually occurring, by absorption of negative electricity from the air: this may be seen to take place luminously in the dark, especially about the hair, eyelashes, fingers, &c. During this luminous discharge, heat is evolved, the circulation becomes quickened, the secretions generally become more active, and perspiration breaks out. A person thus situated is said to be in an *electric bath;* and it is by no means improbable that this might be frequently employed with advantage in certain affections in which the functions of the skin and mucous membranes are deficient. The evolution of heat during this silent discharge is sufficient to demonstrate the mode in which the physiological effects alluded to are produced.

If, whilst a person is connected with the prime conductor, and his whole surface is highly positive, or exposed to the *electric bath,* any conducting body connected with the earth, as the hand or a metallic ball, be brought near him, it becomes highly negative by induction; and when sufficiently near, the negative electricity combines with the positive of the person's body, producing a vivid flash of light and a snapping noise, forming the disruptive discharge, or what is called *the electric spark.*

When the influence of a large quantity of electricity is deemed desirable, we have recourse to that form denominated galvanic or voltaic electricity. This is readily excited by various forms of chemical action. The apparatus I prefer, is

that described in a paper I published some years ago, in the London and Edinburgh Philosophical Magazine, Nov. 1837; and may be briefly described thus:—A bundle of soft iron-wire is placed in the centre of a wooden reel or bobbin; around which is wound a quantity of stout insulated copper-wire having its two ends free, for the purpose of being connected with a single pair of plates of copper and zinc exposed to chemical action; over this is wound about 1300 feet of very thin insulated copper-wire. The two ends of this coil are furnished with directors, for the purpose of being applied to any portion of the body or limbs required. If, then, one end of the inner coil be removed from the battery, the constraining inductive force previously exerted on the thin coil is removed, and all the electricity naturally present in it is discharged through the portion of the body or limb touched by the director, producing an electric shock. By adapting a piece of apparatus for mechanically breaking contact with the simple battery employed, a series of shocks can be sent through a limb, either very slowly and mildly, or at the rate of two thousand or more in a minute; producing such a rapid succession of discharges, as to rise to a sensation amounting to insufferable torture.

[Dr. Bird then relates the effects of this agent in Chorea, Paralysis, and Amenorrhœa. And first with respect to its effects in Chorea: he gives a list of 36 cases, in nearly all of which it was remarkably successful; the only remedy combined in the treatment being purgatives. In most of these cases other remedial treatment had been previously adopted in the hospital, and were sent to the *electrical ward* as a last resource. In every case he "confined the treatment to sparks taken in the course of the spinal column every alternate day for about five minutes each time, or until the papular eruption made its appearance." With respect to passing the shocks along the affected limbs in chorea, it is particularly necessary to notice Dr. Bird's own words:]

I have never seen any good effect to result, in cases of chorea, from the transmission of electric shocks along the affected limbs: on the contrary, in every instance the involuntary movements have been increased, often to an alarming extent; and if employed when the patient was convalescent, it has invariably aggravated every symptom, and often

rendered the patient as bad as when first admitted under treatment. [He then proceeds to say:]

It may now be asked, in what light is electricity to be regarded, in the treatment of chorea, and certain involuntary motions of the voluntary muscles analogous to those occurring in this disease? From the results of the cases treated at Guy's Hospital, no doubt can remain, on the mind of any one, that electricity really exerts a decided, not to say specific, influence on these affections: and although, on its first application, all the symptoms often become increased, from, probably, the timidity of the patient, and the novel character of the remedy, yet, where it has been persevered in, in thirty-five of the thirty-six reported cases, it has either completely cured, or greatly relieved the patient: the case in which it failed, the 29th in the table, would scarcely be regarded as a fair one, as there was but little doubt that disease of the membranes of the spinal cord existed. As I feel extremely unwilling to recognise the existence of more specific agents than necessary, I would venture to suggest that electric sparks, when drawn from the spine, may act by the irritation they produce: and this appears countenanced by the fact, that the rapidity with which the patient's symptoms are relieved is nearly in a ratio with the facility with which the peculiar papular eruption makes it appearance. If future experience should countenance this view, the remarkable influences exerted by electricity in the treatment of chorea may be referred to the principle of counter-irritation. It may next be inquired, whether, in the treatment of chorea, we ought to trust to electricity alone? In answer to this, it may be stated, that I have repeatedly treated severe cases of this disease successfully with this agent, without the administration of any medicine at all, and in the majority of the thirty-six cases in the table, no internal medicine except an occasional purgative, was administered during the electrical treatment. Still, it is obvious that, in many cases, the disease is kept up and excited by the irritation produced by some deranged function; and this of course it will become the duty of the physician to set right, before or during the application of the electricity. The case of Eliza Raven affords an interesting illustration of this: here the chorea either depended, *ab initio*, upon the non-performance of the uterine functions, or was

kept up by it; and, accordingly, a few electric shocks through the pelvis, by restoring the deficient menstrual discharge, at once cured the patient.

[We next notice his observations on cases of *paralysis.*]

Of these cases it may be generally remarked, that those in which the paralysis, whether of sensation or motion, or both, depended upon exposure to cold or rheumatism, upon some functional affection often of a local character, or upon the impression produced by effusion in some part of the cerebro-spinal centre which had become absorbed under the influence of previous treatment, the result of the application of electricity was most successful; whilst in those cases in which the paralysis depended upon some persistent structural lesion, whether produced by accident or otherwise, I never saw the slightest benefit result.

[The first cases are those of "*dropped hands.*"]

In the treatment of these cases, electricity was generally employed in the form of sparks drawn from the upper part of the spine, so as to exert its influence over the origin of the spinal nerves forming the axillary plexus.

In cases where the general health was not much deranged, the use of electricity over the spine, and drawing a few sparks, occasionally from the paralysed extensor muscles of the wrist and hand, with the exhibition of an occasional laxative, was generally remarkably successful. But in those instances in which the patient was of cachectic habit, and the constitution deranged by previous or existing functional derangement of the digestive organs in particular, electricity was of no service, or, at most, of doubtful efficacy, until the deranged functions had been relieved by the remedial measures employed.

In cases of the dropped hands of painters, the conditions before mentioned being borne in mind, the electric sparks drawn from the region of the cervical and dorsal vertebræ are generally efficacious in at least aiding, if not effecting, a recovery. I have generally, also, directed them to be drawn along the paralysed parts; and in recent cases small shocks transmitted along the course of the affected nerves, have considerably accelerated convalescence: but in chronic cases I have repeatedly seen a cure effected by drawing sparks from the spine, on alternate days, for weeks, after shocks had been passed along the paralysed parts in vain.

Rheumatic Paralysis.—The common history of these cases is, that a person after exposure to damp and cold, and sudden alterations of temperature, suffers from a slight febrile attack followed by inability to move one or other of the limbs, and often a single leg or arm, if either of these have been exposed to the influence of a draught or current of air. In general, sensation remains either slightly or not at all impaired, but the paralysis of motion is generally tolerably perfect. This state may continue for an almost indefinite period; and at length, from want of exercise, the muscles of the affected limb become atrophied, and the chance of relief from treatment of any kind becomes proportionably diminished. In cases of this kind, before this wasting has occurred, the influence of electricity is very remarkable, frequently restoring power to the paralysed muscles in a very short time.

Several cases of paralysis of a single limb, or part of one, from local injury, have been submitted to the action of electricity.

In the few instances of local paralysis that have fallen under my notice, the power of motion has been alone lost, sensation having continued tolerably perfect; and the local application of the current from the electro-magnetic machine has been generally successful; in addition to this local treatment, the general health of the patient has been attended to, by the administration of appropriate medicines, and a vigilant attention to diet. Every one must be aware of the occurrence of cases in which paralysis, generally affecting one side of the body, comes on as a mere effect of congestion or of effusion, which, under the action of depletion and mercury, can be completely removed; and yet the effect of such morbid action, the paralysis itself, remains. Cases of this kind will generally do well by time, aided by the application of friction, baths, exercise, &c.; yet convalescence will be extremely protracted. Here the passage of a few electric shocks through the limbs, so as to arouse, as it were, the dormant functions of the nerves, will at once frequently restore as complete power over the affected limb as the state of the muscles, weakened by previous disease, will admit of. When the paralysis has been of longer date, or the cause producing it of a more persistent character, it will be found necessary to continue the application of the electric shocks for a longer period of time. In these cases, it will generally be found more con-

venient to allow a rapid succession of shocks to pass through the paralysed limbs, by means of the interrupted current from the electro-magnetic machine: Indeed, so far as my experience has extended, I am far more inclined to place reliance on the current of electricity yielded by this machine, than by that obtained by means of friction; as we have at our command an enormous quantity of electricity, of high tension; added to which, its application is much more convenient, and requires less tact than when the common electric machine is employed. The truth of the statement here made, of the class of cases of paralysis in which electricity may be employed with every probability of success, is supported by what we see in its employment in the local paralysis following the application of mechanical injury to a limb; for wherever the nervous trunks supplying a limb are lacerated, or otherwise mechanically injured, we can hold out no hope of relief from the application of electricity, or any other remedy; whilst in those in which, from the shock of the blow applied to the limb, the nervous trunks had been only functionally paralysed, their structure remaining unaffected, the passage of the electric current affected a complete restoration of the previously deficient nervous power of the limb.

In accordance with this reasoning, we find those anomalous forms of paralysis connected with Hysteria generally yield to the application of a few electric shocks. I have, indeed, repeatedly seen hysteric paraplegia yield so rapidly to the effect of an electric shock, as strongly to impress those who were watching the case with a conviction that the whole disease was simulated.

Amenorrhœa.—Scarcely any cases have been submitted to electrical treatment in which its sanatory influence has been so strongly marked as in those in which the menstrual function was deficient. The remarks previously made regarding the electrical treatment of chorea and paralysis alike apply to amenorrhœa: so long as the patient is seriously out of health, as when marked symptoms of chlorosis are present, scarcely the slightest benefit has ever resulted from the employment of electricity: in fact, as this agent can in these cases be regarded but as a local stimulant applied to an organ whose function is deficient, we could hardly expect the menstrual discharge to appear, when, from the deranged state of

the general health, the womb is not in a state to supply the deficient secretion. The rule for insuring success in the great mass of cases of amenorrhœa is sufficiently simple:—improve the general health by exercise and tonics; remove the accumulations often present in the bowels, by appropriate purgatives; and then a few electric shocks, often a single one, will be sufficient to produce menstruation, and at once restore the previously deficient function. It is for want of attending to this rule that so many cases have been said to have been unsuccessfully treated by electricity; and to this statement I must oppose all the experience acquired from the cases treated in the electrical room of Guy's Hospital; for, with but one or two exceptions, every case in which the general health was not too severely deranged, as by chlorosis, has been successful; of course not including those who, from timidity or other causes, never appeared but once or twice at the hospital.

The mode of applying the electric shocks is the following:—Let the patient be placed on a chair or stool; press the brass knob of a director against the sacrum; and if the stays be loosened, so that only the linen intervenes between the latter and the knob, no further exposure is necessary. A second director, furnished with a chain connected with the outside of an electric jar, is passed by the female attendant under the patient's dress, and the knob pressed against the pubes. The jar is then charged; and its ball touched by a third director, connected with the one held against the sacrum by means of a chain. The shock thus passes through the patient's pelvis; and should be repeated ten or a dozen times. The jar employed should hold about a quart, and be about half charged.

In general, whenever the meustrual discharge has appeared under influence of the electric treatment, I have directed the remedy to be intermitted as soon as the flow has been fairly established, and its use to be recommenced about a week before its expected return.

In amaurosis, the results of the trials were too conflicting to afford any satisfactory conclusions: in the majority of instances it certainly did no good: in a very few, it appeared to afford some relief; but in none did it effect any thing like a cure. In various cases of deafness the results of the application of electricity were similar.

In chronic rheumatism, especially in sciatica and lumbago, a considerable alleviation of suffering was frequently effected by drawing sparks from the seat of pain; but the cases submitted to treatment have not been as yet sufficiently numerous to warrant any general conclusions.

Electricity has never been of the slightest service in the treatment of convulsive affections in which the brain was involved, as in epilepsy; whilst, as already stated, in chorea, in which the brain is generally unaffected, the result of the application of electricity was most gratifying.—*Guy's Hospital Reports, April* 1841, *p.* 84—120.

3.—ON THE LAWS WHICH REGULATE THE DEPOSITION OF TUBERCLES.

By Dr. Barlow, Physician to the Surrey Dispensary, &c.

[Although these remarks of Dr. Barlow in the last number of Guy's Hospital Reports, of which he is one of the editors, are not strictly therapeutical, yet they are so excellent that we cannot help placing them before our readers. Dr. Barlow thinks we may lay it down as a rule but seldom deviated from in the attack and progress of disease, "*that any organ is most liable to become the seat of tuberculous deposit, when its vascular and functional activity bears the greatest ratio to that of the other organs of the body.*" This opinion is not agreed to by Dr. Stokes, in his able work on "The Diseases of the Chest," nor by Dr. Carswell, in his article on "Tubercle," in the Cyclopædia of Practical Medicine. Indeed these gentlemen seem to be of quite a different opinion, and regard atrophy, or inactivity of vascular action, as strongly predisposing to tuberculous deposit. The practical reader, therefore, must judge for himself of the value of Dr. Barlow's views. The author first illustrates his opinion by what we observe in the progress of the animal economy towards perfection.

Thus, in the new-born infant we are struck with the large size of the head, in proportion to the rest of the body; the abdomen holds a middle place in this respect; and the chest is the least developed of the three. As childhood advances, the trunk increases in a greater ratio than the head; but at this period the abdomen is much more developed than the

chest; and it is not till youth, or early manhood, that the chest acquires its full size in proportion to the rest of the body. In nearly the same order do we find that tuberculous disease attacks these different regions. No one will, I think, deny, that in infancy and early childhood the brain is more frequently the seat of this affection than at any other period of life; whilst in more advanced childhood we find that tubercles evince a greater partiality for the abdominal viscera: but it is not till youth, or early manhood, that the lungs, which are nevertheless, in the aggregate, peculiarly obnoxious to tubercles, acquire their full liability to them.

The activity of the nutritive function in children seems to imply a corresponding activity of the absorbent system; and we find that hyperæmia of the absorbent glands is of frequent occurrence amongst children, and, accordingly, they are peculiarly liable to tuberculous affections of these organs.

It is, however, to the lungs, the most frequent seat of tuberculous disease, that we are to look for the full elucidation of the laws which regulate its development. The different excretory organs are in a great measure co-adjutive and supplementary to each other; which is, I believe, particularly the case with respect to the lungs and the liver. This is strikingly shewn by the fact, that in the different classes of animals the liver increases in the same proportion as the respiration diminishes, having its maximum of development in fishes, its minimum in mammalia, and its mean amongst reptiles. Now the fœtus in utero may, in this respect, be said nearly to resemble the fish; and accordingly we find that its liver is proportionally much larger than in extra-uterine life. Accordingly, tubercles in the lungs are exceedingly rare before birth; and it is highly probable, that, when they do exist in these organs, they exist in the interlobular cellular tissue, in common with that of the rest of the body.

As childhood advances, and the muscles are more exercised and more developed, whilst the proportion of time spent in sleep is less, there is greater need for the exercise of the respiratory functions. Accordingly, it is not very uncommon to find tubercles in the lungs in the later periods of childhood and in early youth: at the same time it is to be observed, that we generally find them in a more advanced stage in other parts of the body. I have, myself, examined many children

in whose lungs tubercles were found; but, from what I have observed, I should say that it is much more frequent to find children dying *with* pulmonary phthisis, than *of* pulmonary phthisis; the tuberculous disease being more advanced in some other parts of the system, as the brain, the bronchial or mesenteric glands, the peritoneum, or the glands about Glisson's capsule.

[With respect to some of the external circumstances which appear to influence the development of tubercles, Dr. Barlow says:]

It appears that a high temperature, especially if it be combined with a damp atmosphere, has a tendency to produce an increase in the volume of the liver; as is seen in the frequent effect of a removal from this to the warm and humid atmosphere of India.

The reason of this change is, I think, this: that owing to the expansion of the air produced by an increased temperature, the actual quantity of oxygen contained in a given bulk of atmospheric air must be diminished, and, accordingly, the decarbonizing agency of the lungs must be impaired. The thirst produced by great heat must add to this result, by bringing a greater quantity of fluid into the portal circulation, from the greater amount of fluids taken into the stomach: and if the cutaneous perspiration be checked or impeded by an atmosphere loaded with moisture, we shall have an additional cause for the increased action of the liver in the diminution of the function of one of the auxiliary secreting organs.

It may indeed be said, and with truth, that the same changes are not so common with natives of warm climates: but it should be remembered, that there may be compensating circumstances, either in manner of life or the condition of other organs: and this is a point which here demands a moment's consideration. Now since the aliment of the carnivorous animal is more rich in azotized and hydrogenous substances than that of the herbiferous, these principles must be transmitted in greater abundance, by the vena portæ, to the liver in the former, than in the latter: and since it has been ascertained by M. Lafargue, that in the different orders of mammalia the development of the liver is in the direct ratio of the carnivorous instinct, and in the inverse ratio of the

herbiferous, it follows that one office of the liver must be to separate these principles from the blood; whence it may be inferred, that besides being a co-adjutive or supplementary organ to the lungs, the liver separates from the blood of the vena portæ the excess of hydrogen and azote with which that blood is surcharged; and these substances, having a tendency to pass out of the system by the liver, must act as stimulants to that organ. So that, if, in addition to the stimulating effect upon the liver, of a warm and humid climate, the inhabitant of that climate makes use of an animal diet with more or less of alcohol (a hydrocarbon), we shall have the over-stimulated liver of the Anglo-Indian: but, on the other hand, if the diet consist principally or entirely of vegetable, and especially farinaceous substances, as is the case with the Hindoo, we shall have the effects of the climate counteracted in some measure by the nature of the food. In the hot and arid climate of Africa, and especially among the dark races which inhabit it, we have an important compensation for the tendency of diminished respiratory function to produce over action of the liver, in the increased activity of the skin as a depurating organ, which not only exhales a larger proportion of water and carbonic acid, but also excretes an unctuous substance. Amongst these, animal food, though sparingly enjoyed, is not entirely abstained from, as is the case with the Hindoo.

The same line of reasoning would lead us to expect, in the temperate zones, and especially in the colder parts of them, a greater liability to over action of the lungs; which would no doubt be productive of mischief, were it not counteracted by the use of a greater proportion of animal food. This not only proves a stimulus to the liver, but its azotised ingredients, being in part carried off by the kidneys, act as stimulants also to these important organs. And the same mode of reasoning may also be further extended to the inhabitants of the circumpolar regions, where, upon the same hypothesis, we should expect that a diet consisting almost exclusively of animal substances would be found most suitable. And a strong argument in favour of the truth of the view which I have taken of the effect of climate upon the relative activity of the excreting organs, is, that nature has provided the inhabitants of these different climates with that kind of

food which, according to this view, would be most conducive to health, and has, moreover, given them an appetite for it.

It appears, then, that increase of temperature, especially if combined with a humid atmosphere, must increase the action of the liver, and diminish that of the lungs; but that, if the air be drier, the lungs are still relieved, but a greater amount of depurative action is performed conjointly by the liver and the skin: and, conversely, that a depression of temperature must call the lungs into greater activity, by diminishing the functions of the former organs. It also follows, that, since in a warm climate the development of the liver must have been favoured at the expense of that of the lungs, a change to a cold climate must call the latter into a state of over-activity; whilst the same effect must frequently occur amongst those who reside in climates subject to sudden variations of temperature.

And this is precisely what we observe in respect to phthisis; the inhabitants of cold climates are, *cæteris paribus*, far more liable to pulmonary phthisis than those of warm climates; whilst a climate subject to sudden changes of temperature seems still further to favour the production of this disease: and a removal from a warm to a cold climate is frequently found to produce it, not only in men, but also in the lower animals; as is seen in those brought from the southern latitudes to the menageries of this country.

It follows then, that those climates, and those changes of climate, which excite the lungs to the greatest functional activity are precisely those in which phthisis is most readily and frequently produced.

[Dr. Barlow offers an ingenious explanation of tubercles oftener occurring and commencing at the upper parts of the lungs than in other parts. He says:]

It must happen, that those cells—in order to reach which the air has the least distance to traverse—must be the first, and therefore most constantly, inflated; and these cells occupy the upper and posterior portion of the lungs. But there is still another reason why this portion of the lungs must be most regularly inflated in ordinary respiration; namely, that they offer less resistance to the entrance of the air. One of the principal obstacles to the entrance of the air into the lungs in inspiration must be the pressure upon the cells, arising

from the weight of the superincumbent lung; and this pressure must, when the trunk is in the erect posture, be the greatest near the diaphragm, and decrease as we approach the apex: so that, from this cause also there must be a greater facility for the inflation of the upper, than of the lower portions of the lungs.

The air which reaches the lower portions of the lungs must, from its longer transit through the air passages, become warmer, and consequently more rarefied, than that which fills the cells of the upper portion of the lung; and must therefore, in proportion to its volume, contain a less quantity of oxygen, the proper stimulus of the lungs.

[The author finishes his interesting paper with the following observations:]

The great principle which, in a therapeutical point of view, it seems to establish, is the importance, in the prophylactic treatment of phthisis, of keeping all the excreting organs in a state of moderate activity, and preventing an excessive performance of function by any. When, however, there appears reason to apprehend that undue excitement of the lungs exists, we must endeavour to relieve the functional excitement through the medium of the other excreting organs; and the hyperæmia, by moderate local depletion, and the use of remedies likely to control the action of the heart. The means of fulfilling these indications will readily suggest themselves to the experienced and reflecting practitioner: but as my great object in the present essay has been to establish a pathological principle, though one immediately applicable to therapeutics, I shall not now enter further into details, than to state, that in cases where I have observed a diminished resonance on percussion under the clavicle, with preternatural resonance of the voice in the same situation, occurring in connection with constitutional symptoms calculated to excite the apprehension of phthisis, especially when they presented themselves in a member of a strumous family, I have generally been in the habit of applying leeches or cupping glasses, and afterwards occasional counter-irritants, and of exhibiting internally sulphate of quinine in combination with digitalis, and some narcotic which seems most applicable to the particular instance. So large a proportion of these cases has been benefited, that I am much inclined to

think that in some the invasion of phthisis has been warded off. The object of the quinine has been to counteract that general debility of the system which seems associated with the tuberculous cachexia; and that of the digitalis to prevent hyperæmia of the lungs, by moderating the action of the heart.—*Guy's Hospital Reports, April* 1841, *p.* 209—228.

4.—TINCT. FERRI SESQUICHLOR. *(Tinctura Ferri Mur.)* IN DISCHARGES OF BLOOD FROM THE URETHRA, &c.

By Charles Clay, Esq., Manchester.

[Mr. Clay takes a sensible view of these cases. He attributes the collection of blood in the bladder, which we occasionally meet with, not so often to disease of the bladder itself, as to disease of one or both kidneys. The small quantity of urine which is excreted in most of these cases, is strong presumptive evidence that the kidneys themselves are in fault. The injection of warm water into the bladder merely removes the coagula without curing the disease. The same observation applies to the injecting of saline solutions, such as salt, which, however ingenious in preventing the coagulation of the blood, which collects, does not act on the kidneys; and perhaps only stimulates these organs unnecessarily. Mr. Clay proceeds in his paper as follows:]

In all the cases where great discharges of blood have taken place by the urethra, it is generally remarked that the quantity of urine is small; and this is a strong presumptive proof that the disease is seated in the secreting organs, and not in the bladder: under such circumstances we can hope for no advantage by local applications to the inner surface of the bladder; it must be evident, our only advantage is by constitutional treatment, assisted by local applications over the region of the kidneys. I have just discharged a case cured, illustrative of this subject. Mr. Wood, aged sixty, of Oldham-road, Machester, sent for me in great haste; I found him unable to pass any urine, only a teaspoonful, or at most two, of blood, came away at every attempt; the bladder was distended, and the abdominal surface very tender. I passed the catheter; about six ounces of blood came away, considerable relief was given; the blood discharged was nearly pure, and destitute of urinal smell. As the quantity of

blood discharged was but trifling, I proposed passing the catheter again next morning; in the mean time I ordered a warm fomentation to the abdomen, and gave the following:—

Tincture of muriate of iron, ʒ j; tincture of opium, ʒ iss; infusion of Iceland moss, infusion of gentian, of each ℥ iv. Let an ounce be taken every four hours.

On my visit next morning, I learned that little rest had been obtained, the desire to void had been frequent, but the character of the blood was much changed, very dark in colour, and watery; and the quantity through the night about twenty-six ounces. Finding no further use for the catheter, I ordered the mixture to be used as before. On the 3rd day, all desire, except about twice in twenty-four hours, had left him. The discharge was now high-coloured urine, but not the slightest trace of blood. After continuing the use of the tinct. fer. mur. for about ten days, he gave it up, being quite free from any unpleasant symptom. This case was remarkable as being one that had existed for some years, and all hope of permanent relief was lost; it only forms one of many that I have relieved, or entirely cured, by the same means; occasionally I have obtained relief from blisters and tartar emetic plaster over the region of the kidneys; but except in recent cases, and of no great extent, I have not found them of permanent benefit; on the contrary, few cases have withstood the tinct. fer. mur. The number of cases I have seen relieved and cured by it, warrants the conclusion, that the disease is generally in the kidneys, and must therefore be attacked through the constitution. I cannot resist the opportunity of stating, that the effect of this preparation of iron is equally encouraging in leucorrhœa. In the manufacturing districts a vast majority of females are subject to this affection, and the number applying for relief at the dispensary for this affection alone is incredible. A wash of sulphate of zinc, and a similar mixture as above given in Wood's case, is found to be very effective in spite of the best remedy; however, their standing employment, in an overheated atmosphere, soon tends to a return of the disease. I have succeeded, also, in restoring the menstrual discharge by its exhibition; and as cases of leucorrhœa are frequently the effects of dysmenorrhœa, the checking of the former has not unfrequently restored the latter.—*Lancet, Dec.* 5, 1841, *p.* 373.

5.—*Inspissated Ox-Gall in Jaundice.* By Dr. Johnson.—Dr. Johnson states that he has, in some very bad cases of jaundice, administered inspissated ox-gall in doses of five grains, gradually increased to ten grains, three times a day, with the best effect. He explained the action of the remedy, on the principle that the ox-bile was the best substitute that could be found for the human secretion.—*Lancet, Dec.* 19, 1840, *p.* 447.

6.—*On the Stethoscope with a Flexible Tube.* By Dr. Golding Bird, Lecturer on Medical Physics at Guy's Hospital, and Physician to the Finsbury Dispensary.—[Dr. Golding Bird recommends this alteration in the stethoscope, for reasons which he describes at length in an able paper. It will be sufficient, however, to state, that his reasons seems to us to be very satisfactory, and we therefore proceed in his own words to describe the instrument.]

The following is a description of the modification of this instrument, which I have for some time employed, and which I am anxious to recommend to the notice of my professional brethren, as one which will be found most convenient in practice. The end which is applied to the chest consists of a thin cup of ebony, an inch in diameter, and carefully rounded at its edges: a flexible tube, from sixteen to twenty inches in length, formed of a spiral iron wire, covered with caoutchouc, and bound tightly round with silk or velvet, having an internal diameter of about one-fourth of an inch, is fixed into the apex of this cup: the other end of the tube is cemented into a perforated ebony ball, on the top of which is screwed a slightly concave plate of ivory two inches in diameter, also perforated in its centre.

When this instrument is used, the ebony cup should be held between the fingers and thumb of one hand, against the walls of the chest, and thus, with the utmost facility, and without producing unnecessary pressure, a tolerably air-tight approximation is effected. The ebony ball at the other end should be held in the other hand, and the ivory plate closely applied to the ear. In this manner we have a column of air, bounded at one extremity by the vibrating surface of the chest, and at the other by the membrana tympani, which thus becomes placed in the position most favourable for assuming

vibrations throughout its whole extent.* The cup of ebony has its vibrations damped by the pressure of the fingers grasping it, whilst the covering of silk or velvet performs a similar office, with sufficient accuracy, for the spiral wire forming the tube of the instrument, whilst for the convenient position in which the physician can place himself with regard to the patient, the necessarily close approximation of the end of the stethoscope to the surface of the chest may be effected. In addition to this, the intensity of sound does not appear to be sensibly diminished by the flexure of the tube, and thus we can auscultate the sides and back of the chest by a very slight movement of the body of a patient whilst in the recumbent position. Indeed, no one can very well appreciate the convenience, or, if I may be allowed the expression, the luxury, arising from the use of an instrument of this kind, except those engaged in dispensary practice; for when called upon to visit a patient lying on the floor, or on a low miserable bedstead, in too debilitated a state to be raised into the erect position with safety, the physician can examine the state of the respiratory organs without risking the patient's safety by raising him, or his own comfort by placing himself in a position parallel to that of the poor sufferer whose condition he is attempting to alleviate.

It is perfectly true that by the aid of the instrument which I now take the liberty of recommending to the profession, certain sounds of the heart. depending upon impulse, are not so perceptible as by means of the solid stethoscope, and in these cases the latter instrument, or the naked ear, should be employed. This, however, so far from being an objection, rather adds to the utility of the flexible stethoscope, for by isolating impulse from sound, I am quite convinced that certain soft murmurs existing in some states of cardiac disease, scarcely, or not at all, audible when the solid stethoscope is employed, become very distinct when the attention becomes concentrated on the sound alone by means of the flexible instrument. I have been much gratified by finding that my own experience has been supported by that of others, and that the flexible stethoscope, with the flat or slightly concave ear-piece, which I first used at Guy's Hospital in last June, is now employed by many practitioners for the very reasons to which I have above alluded.—*Med. Gazette, Dec.* 11, 1840, *p.* 440.

* Muller's Physiology, by Baily, p. 1253.

7.—A FEW HINTS ON THE TREATMENT OF INFLAMMATION.

By Dr. Watson, Lecturer on the Practice of Physic, King's College, London.

[This excellent physician very judiciously enters into the treatment of inflammation, and of course places his chief reliance on blood-letting, copiously used at the commencement of the disease. Respecting venesection from the external jugular vein, he says,]

There is a distinct and peculiar danger attending the incision of this vein, that, namely, of admitting *air* into it. You perhaps are aware that if air enters a large vein near the heart, and passes on to that organ, it kills outright. If you open the jugular vein of a horse, and blow forcibly into it towards the heart, the animal drops down dead. The celebrated Dupuytren was performing some operation about the neck, in the course of which he cut across one of the veins there situate: some bubbles of air rushed in at its open mouth, with an audible clucking noise, and, in an instant, his patient expired. The same frightful accident has occurred in operations performed in this country and in America. I was told very lately that in one of our metropolitan hospitals it was thought right, for some reason or other, to bleed an adult patient by opening his jugular vein: the opening was made very near the clavicle, so that pressure between the orifice and the heart was difficult to effect. Of course the blood soon leaves the portion of the vein nearest the heart; and whether by some suction power of the heart itself upon the veins, or how, one scarcely knows, but air rushed in, and the patient was presently a dead man.

[When on the subject of mercury in the treatment of inflammatory diseases, he offers the following valuable hints:]

Patients who are kept under the influence of mercury grow pale as well as thin: and Dr. Farre, who has paid great attention to the effects of this drug, remedial and injurious, holds that it rapidly destroys red blood, as effectually as it may be destroyed by venesection. As an example of this, he was in the habit of relating in his lectures, the case of a lady who was attacked with hematemesis: her gastric system and her liver were gorged with blood. "Her complexion," said the Doctor,

,' was composed of the rose and the violet. Under a course of mercury she was blanched, in six weeks, as white as a lily."

The facts I have already mentioned shew that it has a loosening effect upon certain textures; that it works by pulling down certain parts of the building.

But the great *remedial* property of mercury is that of stopping, controlling, or altogether preventing the effusion of coagulable lymph; of *bridling adhesive inflammation;* and if we, in our turn, could always bridle and limit the influence of mercury itself. it would be a still more valuable resource.

From the little I have now said, you will readily understand in what description of cases mercury is likely to be useful. In common adhesive inflammation, whether of the serous or cellular tissues; whenever, in fact, you have reason to suppose that coagulable lymph is effused, or about to be effused, and mischief is likely to result from its presence, then you may expect much benefit from the proper administration of mercury; as an auxiliary, however, to blood-letting, not as a substitute for it.

There are two expedients which I am confident are often of very great use in checking the violence of the salivation, and in removing the most distressing of its accompaniments. If there be much external swelling, treat the case as being, what it really is, a case of *local inflammation:* apply eight or ten leeches beneath the edges of the jaw bones, and wrap a soft poultice round the neck, into which the orifices made by the leeches may bleed; and I can promise you that, in nine cases out of ten, you will receive the thanks of your patient for the great comfort this measure has afforded him. When the flow of saliva, and the soreness of the gums, form the chief part of the grievance, I have found nothing *so* generally useful as a gargle made of brandy and water, in the proportion of one part of brandy to four or five of water.

[Speaking of antimony, Dr. Watson says:]

Antimony, as far as my own observation goes, is admirably suited to cases of active inflammation, in which mercury would either be not so useful, or could not be brought to bear. It is in inflammation of the mucous membrane of the air passages that antimony is so signally beneficial. You will see a patient labouring for breath, unable perhaps to lie down, with the turgid and livid countenance from imperfect arterializa-

tion of the blood. He has been ill but a short time; it is an acute affection; and upon listening at his chest, you hear that peculiar wheezing sound which we call *sibilus*, in every part of his lungs. I shall have to describe this sound, and its causes, and its meaning, in a future part of the course. You give such a patient repeated doses of antimony; he becomes sick, vomits perhaps, but he feels nausea; his pulse becomes less forcible, his face grows pale, and he can breathe again. The nausea is not a pleasant sensation; but the want of breath is a far more distressing one; and that is greatly mitigated. Perhaps a free secretion takes place from the congested membrane, and then the patient is easy and safe. Now you could not effect this change so quickly and readily, or so conveniently, by mercury, and perhaps not at all. Bronchitic affections are very common in children, in whom it is usually difficult to induce the specific influence of mercury.

On the other hand, antimony does not appear to be nearly so valuable a remedy as mercury, when serous membranes are inflamed.

As to the form in which antimony should be exhibited, I apprehend that we shall all come at last to freshly-dissolved tartar emetic. When you desire to obtain its full influence in a short time, you may dissolve a grain of the tartar emetic in two ounces of hot water; and give a fourth part of the solution every half-hour. If the patient becomes pale and sick, you pause a while, and allow him to recover himself; and if the inflammatory symptoms return, you repeat the medicine. It sometimes acts violently upon the bowels, and then it will be necessary to add a few drops of laudanum to each dose.—*Med. Gazette, Dec.* 25, 1840, *p.* 498.

8.—TREATMENT OF CERTAIN DISEASES OF THE BRAIN.

By E. Copeman, Esq.

[We know of no cases which require more careful discernment of pathological condition, than those which simulate apoplexy from compression of the nervous centre. Dr. Corrigan was we believe the first to point out, that many cases which were usually treated by antiphlogistic means were in reality, better cured by stimulation. These cases were chiefly owing to a

diminution of blood in the brain, from valvular disease of the left ventricle, and other diseases of that viscus. The reader will see an account of that author's views, in an able paper by Dr. Law, in the Dublin Journal of Medical Science, for May 1840, an abridged account of which will be found in Retrospect, Vol. I., Article 27. Mr. Copeman, in his interesting cases, lately published in the Medical Gazette, seems to be of a somewhat similar opinion, as far as the employment of stimulants and general treatment, in preference to blood-letting and depleting means are concerned: although he does not at all allude to the state of the heart. Disease in that organ, may nevertheless have existed, and escaped his observation. In most of his cases of apoplexy, paralysis, &c., he was exceedingly cautious in the use of the lancet, as he rightly supposed that they were owing to functional, rather than organic disease of the brain. On being called to the first case, which was one of apoplexy, Mr. Copeman says:]

I found him complaining of giddiness, and his conversation was incoherent—pulse excited, but not very full; tongue furred; slight pain in right temple. I immediately drew about sixteen ounces of blood from the arm, and administered purgative medicines. He was slightly relieved by the bleeding, but in the course of the day he almost lost the power of expressing himself, his memory failed, and he was scarcely able to stand alone. I requested a consultation, and in the evening met an experienced practitioner from Norwich, who advised cupping: this was performed in his presence, and before many ounces of blood could be drawn, the patient had a convulsive start, became faint, and it was feared a paralytic seizure was at hand. The cupping was immediately discontinued, and he was removed to a warm bed.

[He was treated on the antiphlogistic plan, and recovered exceedingly slowly. The same individual had two other attacks of a similar nature, but was treated by mild stimulation and attention to improve the state of the stomach, which had been overloaded with food, and he recovered the use of his speech and limbs in an incredibly short time. Several other cases are then related which were treated with equal success; showing that there are many cases of apparent compression and disease of the brain, when in reality there is only a functional disorder of that part, and which is to be cured

by other remedial means than those applicable to real apoplexy. From his cases Mr. Copeman draws the following inferences:]

1. That apoplectic and paralytic affections may take place in an extreme degree without organic disease of the brain.

2. That they often occur from other causes than pressure on the brain.

3. That bleeding, so far from being always necessary, is in many instances prejudicial.

4. That the effort of vomiting is not so prejudicial in these diseases as is generally supposed.

5. That counter-irritation, both external and internal, is a valuable means of affording relief to the symptoms immediately succeeding the attack.

[Mr. Copeman ends his truly practical paper, by the following observations:]

In case 1, the first attack (for the patient had three separate attacks of apoplexy) seemed to be the result of effusion and pressure on the brain; but it is clear that the 2d and 3rd attacks, although much more severe at the commencement, could not have depended upon such a cause, or recovery would not have been so rapid and perfect. It is probable, therefore, that the first as well as the others arose from disorder of function, and not from organic disease. For the same reasons, the case of hemiplegia (No. 2) must have arisen from functional disturbance of the brain, and not from effusion of blood or serum.

In the second attack, case 1, what are generally considered symptoms of compression were very marked; but had pressure been the cause of them, how could recovery have taken place so rapidly, and relief have been afforded immediately on the stomach rejecting its contents?

It is beyond a question that pressure upon the brain may exist to a greater extent than can be imagined to occur from loaded blood-vessels, without apoplectic or paralytic symptoms being produced. Compression is not the only cause capable of producing those symptoms, and I am inclined to believe that such a cause does not exist in a majority of the cases of apoplexy that present themselves.

In all cases of apoplexy or paralysis, in which the cause is dubious, "and such, on the first examination of them, the

majority of them will probably be, it seems right to try the effect of correcting disorder of the digestive organs, with a view to alleviate nervous irritation, before we proceed to those severer methods, which the belief of the existence of organic or vascular disease in the brain would induce us to institute. For if blood-letting and counter-irritation be employed, in order to diminish vascular action; or if mercury be used to some extent, in order to induce the absorption of deposited substance; these measures must aggravate that disorder of the general health, upon which, in many instances, the nervous affection depends."

A question of great importance remains to be discussed, namely, whether there are symptoms generally present in cases of apoplexy and paralysis, which, by strict observation, may enable us to distinguish clearly between those which require bleeding, and those which would be better treated without it. I frankly confess my inability to answer it satisfactorily, and find that others have also failed in doing so. If I may be allowed to give an opinion, I should say that bleeding is unnecessary or prejudicial where the patient is sixty years of age or upwards; where the pulse is feeble, very frequent, intermitting, slow, or large, and inclined to double beat, (I have always found a pulse with double beat indicative of a state of system best relieved by diffusible stimuli), where the respiration is laboured and accompanied with *cold* perspiration; when there is great mobility of the nervous system with weak muscles, whether the body be thin or *corpulent;* when the attack comes on soon after a full meal, or after great bodily or mental fatigue.

A quick, wiry, resisting pulse, flushed countenance, warm perspiration, noisy breathing, and a tendency to spasmodic muscular contraction, occurring in persons of an earlier age, seem to point out a necessity for resorting to abstraction of blood; but I believe there will be less danger in not bleeding in any case, than in always having recourse to it, where there are *some* circumstances indicative of the propriety of its employment.—*Med. Gazette, Dec.* 25, 1840, *p.* 507.

9.—*Treatment of Cynanche by Guaiacum.* By J. Bell, Esq., Barrhead.—[Several very successful cases of this troublesome and painful disorder are related by Mr. Bell, in which half

drachm doses of the powdered guaiacum every four or six hours, either alone or mixed up in a suitable form, were attended with very remarkable success: and we recommend the reader to turn to the several cases related in the original paper in the Medical Gazette. Mr. Bell's formula is as follows:—

℞. Pulv. guaiac. ʒ iij.; mucil. g. arab.; syrup. simpl. aa. ʒ ij.; aq. cinnamon., aq. puræ, aa. ʒ iv. M. et solve. capt. ʒ ij. 4ta. q.q. h.

One or two days are only required for the cure. In other cases the powdered drug was given in some simpler vehicle. It will be found chiefly successful, if given before suppuration has taken place.—*Med. Gazette, Dec.* 25, 1840, *p.* 516.

[Guaiacum is a favourite remedy of Dr. Seymour's in rheumatism. In one of his late clinical lectures, at St. George's Hospital, speaking of the treatment of rheumatism, he says:]

I generally premise a good bleeding, and afterwards administer the *guaiacum mixture,* and in a few days the patients are well. In the cases at present under our notice, I have followed out this plan, and you have seen how very successful it has proved. How the *guaiacum mixture* acts in these cases I do not pretend to say, except that it causes a profuse increase of the secretions from the skin, the bowels, and the bladder; I never find that it begins to effect a cure until all these are fully established.—*Med. Times, March* 20, 1841, *p.* 300.

10.—PIPERINE IN INTERMITTENT FEVER.

By Dr. Hartle, Port of Spain, West Indies.

[As many cases of intermittent fever resist the use of quinine, and all the other remedies in ordinary use, we may look upon the following cases exemplifying the use of piperine as an excellent addition to our knowledge of the treatment of this disease. Dr. Hartle says:]

I began, as soon as the sweating stage was established, by giving three grains of piperine every hour, until eighteen grains had been taken; and on the following day, when the intermission was complete, I gave the same quantity every three hours. It has in every case succeeded in checking the paroxysm, and as soon as that was accomplished, I gave for some days the following pills:

℞. Pilulæ hydrarg. gr. i.; piperinæ, gr. ii.; sulph. quinæ, gr. ii.; syrup cum. q. s. f. M. f. Pil. no. 1. omni mane. meridie, et vespere capienda.

I shall here subjoin a few cases of long standing intermittent, in which the piperine was given as soon as general perspiration commenced, without regard to the heat of skin or quickness of pulse.

1. Miss S., aged 18.—This young lady had suffered periodically upwards of two years with intermittent. It appeared that she had taken sulphate of quinine in great quantities and very large doses, with the effect of only subduing the disease for a short time. She had been removed to North America for change of climate, and every other means had been used to cure the disease, without success. Her father in conversation mentioned this to me, and I advised him to give the piperine; and, accordingly, gave him the following prescription, with directions to begin as soon perspiration became general, and that, should she escape the second paroxysm, the pills were to be contiued every third hour.

℞. Piperinæ, gr. v.; m. g. acaciæ, q. s. f. M. f. pil. no. 1. 2da. quaque hora sumenda.

It is now upwards of three years, and she has continued free of the malady.

2. Mrs. C., aged 33, had had several severe paroxysms of tertian intermittent, but very irregular in its attacks. Infusion of bark as well as sulphate of quinine had been freely taken, but to no purpose. On the morning of the 17th of April, 1837, while taking a cold bath, she was seized with ague. I was sent for at seven o'clock a.m., I found her shivering severely. I ordered warm drinks to be given frequently. At twelve o'clock the cold shivering continued, and the symptoms were alarming. The pulse was scarcely to be felt. The coldness was universal, clammy, and unpleasant to the touch. The lips were of a slate colour. The countenance was contracted, the eyes sunken; and the patient evinced marks of great agitation and alarm.

I ordered hot flannels to be applied over the chest and abdomen, the legs and feet to be rolled up in hot cloths, and stone vessels filled with hot water to be constantly kept under her arms, and along the inside of the thighs and legs. Warm brandy toddy was ordered to be frequently given in small

quantities. At four o'clock p.m., finding that reaction could not be brought on, I gave five grains of piperine, which was with difficulty swallowed; and I washed it down with an ounce of brandy, in half a tumbler of champagne. I then ordered full doses of the aromatic spirit of ammonia every third hour, and the champagne to be continued.

At six p.m. reaction commenced; and as the heat increased I withdrew the hot applications, and suspended the stimulants. By eight o'clock at night the heat was general, and in proportion to the cold stage. The following morning the sweating stage commenced; and, as soon as it was general, I began with five-grain piperine pills every second hour, and continued them for four days. She had no return of the disease; and for a few days I continued to give them four a day. She has never had a return since.

3. Mr. W., aged 27. This young gentleman, a European, had, soon after his arrival in this island, about a year and a-half ago, a severe attack of intermittent fever, which ended in tertian intermittent. He had taken a quantity of sulphate of quinine, which for a short time checked the paroxysms; but for three months it had constantly returned every forty-eight hours, and so reduced his strength that he was unable to perform the duties of his occupation. In consequence, his employer directed him to call on me for advice. On examining him, I found his liver and spleen enlarged and hard, yet free from pain when pressed on. I ordered the following pills:

℞. Piperinæ, gr. xxxvj.; pilulæ hydrarg., gr. xij. M. f. massa in pilulas xij. distribuenda. Quarum capiat unam 2da quaque hora.

And in case the bowels were not free, he was to take the following mixture:

℞. Sulph. magnesiæ, ℥iss.; sulph. quinæ, ϑij.; aq. puræ, ℥xx.; acid. sulph. dil. ʒij. M. hab. cyathum pro re nata.

It is now three months since he had an attack of the disease, and his health is perfectly restored.

I must here observe, that a number of patients object to taking the sulphate of quinine, in consequence of its affecting the head; but the piperine, although a powerful stimulant, carminative, and febrifuge, does not in the least degree affect the sensorium.—*Edinburgh Medical and Surgical Journal, Jan.*, 1841, *p.* 98.

11.—THE USE OF CROTON OIL IN CERTAIN NERVOUS DISORDERS.

By Dr. Newbigging, Physician to the Edinburgh New Town Dispensary.

[From several remarkable cases of epilepsy, sciatica, &c., in which Dr. Newbigging found the croton oil very useful, while other purgatives did not exert the same beneficial effect, he is led to suppose there may be some peculiar properties in this drug independent of its violent effects as a purgative. Sir C. Bell first brought it into notice in the treatment of *tic douloureux*. In one patient at sixty, whose attacks of epilepsy came on regularly every six weeks for the last twelve years, a drop and a half was given with good purgative effects, its use was occasionally continued, and the fits did not return. In another patient, a boy five years old, in whom the fits came on twice or thrice in twenty-four hours, and who had been epileptic for two years, one drop was given, the fits soon abated, and the patient ultimately recovered. Those cases are chiefly benefited in which there is "some irregularity in the cerebral circulation." Those cases in which there is organic disease of the brain, or its meninges, were not much benefited by the oil.]

The next case, says Dr. N., which I have to state is that of a woman aged fifty, who had been a sufferer from sciatica for three years, and been under medical treatment without deriving any perceptible benefit. I learned from her that local blood-letting, counter-irritation, setons, &c. had been employed without advantage; and when I and my friend Dr. Philip Maclagan were called to see her, she was unable to leave her bed, and was so helpless as to require the constant assistance of another. We commenced the use of the oil externally as a counter-irritant, and administered it internally in a moderate dose morning and evening. This system she continued for some time, in about a fortnight after its commencement she was enabled to leave her bed, and move about the house. The pain has now left her, and she complains only of want of power in the limbs.

In the following case, that of a gentleman who had, during a period of ten months, suffered great pain in the anterior and lower part of the right thigh, the pain was so acute, as to

be supposed to have a periostitic origin, and leeching, fomentations, blisters, &c., were employed, and medicines given internally, without any alleviation of his suffering. Two drops of the oil were administered. Full action of the bowels with great nausea supervened, and the pain simultaneously left him; nor has it since returned.

Andral states that he has observed great benefit arising from the employment of this oil in neuralgic complaints, when purging ensued; whereas a similar action on the bowels induced by other medicines was not followed by a like result.

It has been ascertained by M. Brandt * that croton oil contains, amongst many other ingredients, a peculiar acid, to which he has given the name of *crotonic;* but whether this be the source of what appears to be the specific action upon the nervous system, which I have endeavoured to illustrate, it would be difficult to affirm.—*Edinburgh Med. and Surg. Journal, Jan.* 1841, *p.* 102.

12.—*Remarks on Blood-letting in Inflammation.*—[In commenting on the practice of Dr. Thomas Barbour, published in the American Journal of Medical Sciences, viz., that of bleeding in the erect posture in inflammation, and then giving a large dose of opium to prevent reaction, the editor of the Edinburgh Medical and Surgical Journal justly states, that, however new the practice may be thought in America, it was no novelty in this country. Dr. Armstrong and other eminent physicians having long since adopted the same practice. Our chief object, however, is to publish the following very judicious remarks which accord entirely with our own opinion, except when the disease is in the head, eyes, upper parts of the body, in which case, the erect position must certainly be the most proper, and during venesection, must cause the greatest drain of blood from those parts.]

Though Dr. Marshall Hall, and various other physicians, recommend the detraction of blood in the erect position, as best calculated for producing speedily on the system the conditions favourable to the removal of inflammation, it will often be found that it gives rise to a great fallacy. The faintness thus produced is often merely mental, and is always too tem-

* Journal de Pharmacie, Tome xi.

porary and too trifling to facilitate the removal of the congested blood from the vessels of an important organ or membrane in a state of intense inflammation. Blood-letting, to be beneficial, operates not only as a physiological remedy, but by its hydraulic effects upon the whole vascular system, and thereby upon those of the inflamed organ: and, unless the former are relieved of the load with which they are distended, it is impossible that the blood can be withdrawn from the latter, or that their tension and fulness can be diminished. Then comes the physiological effect, which is partly referable to the contractile power of the capillaries of the organ, if not wholly destroyed, and partly to the imbibing and resorbent power of the veins. These effects are always most completely insured by drawing blood in the horizontal position; and by taking as much as is likely to diminish sensibly the tension and fulness of the vascular system. It is chiefly in the state thus produced, when the quantity of blood is so small as not to stimulate in the wonted manner either the heart and arteries or the system at large, that the exhibition of opium in large doses becomes beneficial and curative. It then allays nervous irritability, favours the return of the circulating current to the heart and large vessels, and, by acting on the capillaries, determines the skin, and abates internal determination.—*Edinburgh Medical and Surgical Journal, Jan.* 1841, *p.* 258.

13.—ON CHLOROSIS.

By Dr. Ashwell, of Guy's Hospital.

[We extract the following valuable remarks from the review of Dr. Ashwell's work, on the diseases peculiar to women, as they will be found truly practical.]

Pathology of Chlorosis.—It may probably be fairly assumed, certainly it is the most prevalent opinion, that chlorosis primarily depends upon a morbid condition of the blood, which secondarily affects the ovaries and uterus, by retarding their growth. This opinion is supported by the fact, that in the blood of chlorotic patients there is an increased proportion of the serum, with a marked diminution of crassamentum. This has always been my view of the disease; nor would it

be difficult to trace to this morbid condition of the blood many, nearly all, the different theories that have been propounded.

Treatment of Chlorosis.—The treatment of simple chlorosis should be the type for the treatment of the other forms; but, a most grave error is too often committed, by considering it a local, not a constitutional disease; and ignorant practitioners from the untimely use of drastics and emmenagogues, have yet farther reduced the already enfeebled powers and facilitated the advent of pulmonary disease. The author deplores, in common with every medical man of proper feeling, the prevalent faulty notions on the subject of physical female education, leading as they do to the production of so many serious and fatal diseases: he believes that, were these amended, chlorosis would become a rare disease. Alas! many, many yet must be the victims sacrificed at the shrines of fashion and folly, ere mothers learn prudence, or fathers compel the observance of the dictates of common sense.

Our first attention must be directed to the improvement of the state of the digestive organs, for, how shall we amend the deteriorated condition of the blood, until the organs of nutrition are in a fitting state for its elimination. But here a prudent hand must guide the means: our object is not to excite excessive purging, as a direct mode of cure, but to secure the due relief of the bowels by aloes and rhubarb, sulphate of soda and manna, and, where alteratives are required, the hyd. c. creta. Mild cordials should be combined with the aperients. Warm clothing, regular exercise, and, when the state of the appetite will permit, meat diet and mild malt drink, are to be recommended. If we succeed in improving the state of the digestive organs, the general vigour is in some degree restored, and the complexion partially cleared, but the catamenia are seldom by this alone induced. Now is the appropriate period for the administration of *iron*, especially the *sulphate*, while, had this remedy been employed prior to the due regulation of the secretions of the alimentary canal, the symptoms would have become aggravated, and not relieved. Its effect, when given judiciously, is sometimes magical. In some cases the subcarbonate is better borne, and occasionally other tonics, as quinine, sarsaparilla, zinc, &c., effect the purpose.

As to *emmenagogues*, they are best employed when the pallor has become diminished, the bowels more regular, and the blood both more abundant and of richer quality. *Iron* (and especially the iodide, when the strumous diathesis is associated with chlorosis) is often alone a sufficient emmenagogue. The use of the mustard hip-bath, and of the local salt shower-bath across the loins, are excellent adjuvants. The injection of the vagina with the strong ammonia (liq. ammon. ʒj. lactis lbj.) has proved useful in the hospital. Dr. A. has great doubts of the utility of applying leeches and cataplasms to the mammæ; he has often seen electricity useful. Travelling, with the change of scene and of habits it necessitates, as also a visit to chalybeate waters, and a sea voyage, have often cured chlorosis. The treatment requires to be early adopted, and most perseveringly continued, perhaps for months. As the cure progresses the diet should be improved, and the patient permitted to take mild ale or porter, or, if these are disagreeable, a little negus with her meals.

[The following remarks on emmenagogues we would strongly recommend to the young practitioner.]

The author does not believe that there are any medicines which exert a specific effect upon the menstrual secretion, but that there are several, which, by reason of their stimulating the uterus, become important auxiliaries. These means are contraindicated in amenorrhœa and chlorosis, arising from malformation or absence of the generative organs, as also in cases of mere absence or slow development of puberty, or when the amenorrhœa is connected with phthisis or plethora. They are found useful in inactivity of the uterus, occurring after the establishment of puberty, where neither plethora, or marked delicacy of constitution is present, also in hysterical irritable women, in whose cases cordials and tonics have been tried in vain. In chronic suppression they are especially indicated. Their exhibition should be preceded by local depletion, regulated diet, and purgatives.

1. *Local Emmenagogues.*—The only powerful emmenagogue by which the uterus can be directly stimulated is *electricity*. Although employed with some success of late at Guy's, it is an uncertain remedy and should be very cautiously used. *Leeching the os uteri.*—If some leeches be applied by

means of a glass, a few days prior to the period, and repeated several times, by removing the congestion, they will frequently reproduce the secretion. *Stimulant injections of the vagina.*—Dr. Ashwell speaks highly in favour of the ammoniacal injection. It should be commenced three days prior to the expected period, and should be retained in the vagina for ten or fifteen minutes, by closing the vulva with a napkin. It should produce a sense of heat, tingling, or even of pain, and should not be employed when congestion is present. He reprobates, as risking the excitement of peritonitis, the injection of the uterine cavity itself. *Mustard hip bath* is often very useful, but the patient should remain in it an hour each time. The exhibition of *mustard* by the mouth (gr. 8—12 ter quaterve ex. M. camph.), just prior to the menstrual period, is often attended with excellent effect. *Sexual intercourse* is sometimes a good emmenagogue, though of course, of but limited application. *Stimulating clysters* are much recommended by some authors, and Dr. Ashwell has used that of Dr. Schonlein (aloes gr. x. mucil. ℥j. bis terve die) with good effect. Leeching the vulva or pubes, stimulating the thighs, hypogastric or lumbar regions with embrocations, flesh-brushes, &c. &c. are all useful adjuvants.—*Medico Chirurgical Review, January* 1841, *p.* 79.

14.—*The Use of Poultices in Inflammations of the Great Cavities.* By Sir Francis Smith, Paris.—Nothing is more remarkable in the practice of physic in France, than the constant use of cataplasms in the treatment of inflammations of the great cavities. The moment inflammation is supposed to exist in the chest or abdomen, the first order given is to apply cataplasms. Where a practice prevails so generally, it is worth while to enquire into its value, and to examine whether its advantages might not entitle it to a favourable consideration, where its use has hitherto not prevailed.

The benefits to be derived from the application of poultices over inflamed cavities, are analogous to those sought from, in their application to other inflamed parts, and may be stated to consist, first, in maintaining the temperature of the parts over which they are applied, and thus giving nature a better chance of effecting the resolution of the existing inflammation; second-

ly, by their moisture mechanically aiding in the relaxation of injured tissues; and thirdly, by drawing the capillary circulation towards the surface, acting the part of derivatives or revulsives.

The usual material for poultices is the linseed meal; and they are usually included within linen cloths. The poultices are generally so large as to cover the seat of inflammation. They should be removed and renewed every three or four hours. Particular attention to the latter circumstance is desirable, as the edges are liable to grow cold, and a disagreeable and dangerous dissipation of animal temperature is the result; and in this and in their weight consist, I think, the principal disadvantages of the system.

In the bronchial irritation attendant upon the exanthematous fevers, poultices to the chest are universally employed; and where any want of energy appears to exist in the system, preventing the coming out of the eruption, cataplasms, consisting of the usual linseed meal, with the addition of a very small quantity, say a twelfth or a fifteenth part of mustard meal, (not flour,) are applied to the feet, and maintained for days together; thus keeping up both the temperature of the extremities, and gently stimulating the skin. The same mixture is also, when necessary, applied to the calves of the legs and thighs—the practice in the latter instances being similar in intention to that adopted in Great Britain; but from the mustard meal being less irritating than the flour, and being used in so small a proportion, the sinapized cataplasms can be longer retained in their situation.

Pleurodynia, diaphragmitis, and many other affections of a painful nature, are likewise treated by poultices; and it is certain, that their effects are often, in such cases, very satisfactory.—*Dublin Journal of Med. Science, Jan.* 1841, *p.* 451.

15.—SALIVATION FROM IODIDE CONTRASTED WITH THAT FROM MERCURY.

By Sir F. Smith. Paris.

In the July Number of this Journal* I made mention of a case in which I had met with salivation from the use of hydriodate of potass. The fact of salivation occurring from the use of iodine or its preparations is not new: I have, since

* The Dublin Journal of Medical Science.

the publication of the article referred to, met with it in two instances, in one that of a young gentlemen using the hydriodate of potass, for a scrofulous necrosis in the bones of the legs; the other that of a young lady, who, for a glandular disease of the neck, was put under the influence of iodine, administered in the watery solution as recommended by Dr. Osborne, of Dublin, at the rate of a grain to the pint; both had been under the influence of the mineral during nearly four months, and had been copiously salivated, and required mercurial purgations, and the administration of bark for the relief of the ptyalism. In each of these cases the entire absence of fetor of the breath was remarked, as was mentioned to have been the case in that which was recorded in the July number. Now, it is worthy of inquiry, why, when fetor is so constantly found to attend salivation by mercury, none should accompany salivation by iodine or its salts? I believe the difference to depend upon the fact, that in the action of mercury upon the mouth, there is not only an action induced upon the salivary glands, but also upon the mucous membrane of the mouth, from the alteration in the structure of which latter tissue arises the fetor. If the mucous membrane of the lips, cheeks, or gums, be examined with a powerful lens, at the period when mercurial action is commencing in them, a species of ulcerative absorption will be observed to be in progress, which, being increased by the continuance of the cause, soon ends in ulcers of greater or lesser size, perceptible to the naked eye. On the contrary, in the salivation by iodine, the principal, if not the only action of the medicine, is directed to the salivary glands; and though I have in one case observed, with great surprise, the teeth to be loosened, I have never been able to discover any thing like ulcerative action to exist in the mucous membrane of the mouth, and upon this peculiar difference in their relative actions depends, I believe, the presence or absence of fetor of the breath during salivation induced by mercury, and iodine or its compounds.—*Dublin Journal of Med. Science, Jan.* 1841, *p.* 453.

[In another part of these interesting medical observations of Sir F. Smith, he mentions the case of a man on the surface of whose skin air was secreted in abundance. He says,]

On the morning of the 15th, I was hastily summoned to

see my patient in a bath. He told me on my arrival, that the reason of his sending for me, was for the purpose of convincing me of the truth of his statements as to the exudation of air or gas from the skin; and as he only occasionally was able to demonstrate it, he lost no time in informing me of its occurrence. I found him in a bath at 79° of common river water (Seine); and upon examining his chest, shoulders, abdomen, and hands, I found him literally covered with small gas bubbles. I inquired of the attendant of the establishment, if he could account for the circumstance, and he said he had never observed anything of the kind before. I then caused my patient to lift his hands alternately from the water, when, of course, the air bubbles disappeared from those extremities; and on his returning them to the water, and retaining them near the surface, I could plainly perceive bubbles make their appearance, at first very minute, but gradually increasing in size, till they reached that of a pin's head, and the palms of the hands again became coated with them. I caused him to wipe away the bubbles from his hands and chest repeatedly, and in every case they were gradually replaced by others; they ran together, when pushed by the finger, like globules of quicksilver, and could be moved about upon the surface of the hands or body, without quitting them, or becoming loose in the water. These experiments and observations continued nearly twenty minutes that I was present; and towards the end of the bath, the edges of the metallic reservoir were coated all round, but more particularly towards the upper end, where the shoulders had been, for a depth of from one to two inches, with small air bubbles, as if its contents had been charged more or less with carbonic acid gas. Mr. G. also expected to be able to exhibit to me an evolution of gas from the urinary bladder; but on his attempting to do so, was unsuccessful.—*Dublin Journal of Medical Science, Jan.* 1841, *p.* 457.

16.—ON THE PREPARATION OF THE PROTIODIDE OF IRON.

By Messrs. T. and H. Smith, Chemists, Edinburgh.

The protiodide of iron has not yet come into that general use which its efficacy, as a medicinal agent merits, a circumstance arising from the great difficulty of obtaining it in a pure state. We have procured specimens of this compound

from various sources, and, except in one instance, invariably found that, when dissolved, they yielded a solution of the periodide, with the separation of a large quantity of peroxide of iron.

The protiodide of iron has its elements united by so weak an affinity, and the iron has so strong an avidity for oxygen, that, unless very great care is used in preparing it, to regulate the temperature, and avoid exposure to the atmosphere, part of the iron passes into the state of periodide, free iodine is given off, and another portion of the iron absorbs oxygen from the air, becoming peroxide of iron, which is left undissolved on putting the preparation into water. These changes take place even at common temperatures, unless the iodide is carefully kept from contact with the atmosphere. In order to obtain a real protiodide, we would recommend the adoption of the following method as one which we have found uniformly successful.

Having, in the usual way, prepared a solution of the protiodide of iron, boil it down in a glass flask, without removing the excess of iron, till the weight of the liquid is reduced to three or four times that of the iodine used. Then filter quickly into a shallow evaporating vessel, or common saucer, which, having placed in a flat cast iron evaporating basin, surround with an excess of lime, (the proportion being about a pound and a half for every four ounces of the solution), placing it so that when it slakes and swells up it cannot fall into the dish containing the iodide. The iron vessel must then be carefully covered with a flat metal plate, and placed on a pretty hot part of the top of a table furnace. When the iodide becomes black and attains a pretty thick consistence, its state is examined occasionally by dipping into it the point of a spatula. When the water is nearly expelled, the iodide, as it cools, concretes on the point of the spatula into a solid, which is soft and slightly moist in consequence of the presence of a small quantity of water. When in this state it ought to be removed from the furnace, after being swept with a spatula, so as to remove any scum of decomposed iodide from the surface, and the basin, with the cover remaining in its place, wrapped up in several folds of a thick dry woollen cloth or linen towel, so as to retain the heat as long as possible, and allow the iodide to cool very slowly.

On cooling it will be found in the form of a black, brittle, opaque, and crystalline mass, with a shining fracture. The iodide thus obtained is quite soluble in water, and produces a solution of a pale green colour. As soon as the iodide has cooled, it must be broken into small pieces, and rapidly put into very small and carefully stoppered bottles, not containing more than one or two drachms each, which must be kept in as cool and dark a place as possible. When the iodide is prepared in a close vessel with lime, as gentle heat is not sufficient to render it anhydrous, from its having such a strong attraction for water, it may be kept for days under these circumstances, and still remain moist, but if pretty sharply heated, and removed before the water is quite expelled in the manner recommended, it may easily be obtained in an anhydrous state without danger of decomposition, except at the extreme edge of the cake of iodide; this part ought therefore to be rejected. We have found that the protiodide of iron cannot be deprived of water by lime in vacuo at common temperatures, as, under these conditions, the iodide seems to have a much stronger affinity for water than the lime. We have kept the solution *in vacuo* for more than a week, along with a very great excess of lime, without obtaining it dry,—the solution looses water up to a certain point, and then remains wholly unchanged.—*Edinburgh Monthly Journal of Medical Science, Jan.* 1, 1841, *p.* 26.

[The following method of preserving the iodide of iron is given by Dr. A. T. Thomson.]

Dr. A. T. Thomson brought before the Westminster Medical Society an improved mode of preserving the iodide of iron, which, from its very ready decomposition, was very difficult to keep in an effective state. He had been indebted to a foreign journal for the suggestion of the plan; he had found that a syrup composed of a fluid drachm of the preparation, and a drachm of white sugar evaporated to one drachm altogether, would keep for a long period, the iodide of iron remaining perfectly unchanged. The fluid preparation might be made of any strength, but he generally preferred one of which a drachm held three grains of the preparation in solution. He believed that the protoxide, the carbonate, and other preparations of iron, might be preserved in the same manner in as pure a state as they were at the moment they were found.—*Lancet, Jan.* 30, 1841, *p.* 655.

M. Oberdoerffer, of Hamburgh, has proposed to substitute the sesqui-iodide of iron for the iodide, as being less subject to decomposition than the latter. It is made by forming, in the first place, an iodide in the ordinary way, by the union of sixteen parts of iodide and six of iron in thirty-two of water. This is filtered, diluted with 128 parts of water, 8 parts of iodine added, and the whole quantity of water made up to 320 parts. If the above *parts* are made *grammes*, eight grammes of the solution are equal to forty-five centigrammes of iodine. It produces the same effects as the iodide, but ought to be given in smaller doses, being more active.—*Edinburgh Monthly Journal of Med. Science, Jan.* 1841, *p.* 56.

17.—ON THE USE OF OPIUM IN ACUTE INTERNAL INFLAMMATIONS.

By Robert Christison, M.D., F.R.S.E., Professor of Materia Medica in the University of Edinburgh.

[Although we cannot entirely agree with Dr. Christison in some of the following views of the effects of opium, we present a full account of them, and leave the reader to draw his own conclusions. But for our own part, we should be more sparing in the use of this powerful medicine, as its abuse or mismanagement might easily be fatal in inflammatory diseases. Dr. Christison proceeds to say:]

1. The varieties of internal inflammation which best exemplify this action of opium, when given singly, are the inflammations of the mucous membranes. Of such diseases there are at least four which may often thus be successfully treated without almost any other remedy, namely,—coryza, catarrh, influenza, and dysentery.

As to *Coryza*,—most persons, on feeling its approach, are content to submit without a struggle to the infliction, and eschewing alike physic and the physician, let their "cold in the head" take its own way. But few would do so, were they aware how easily and how agreeably so tormenting a visitor may for the most part be got rid of. For twenty years I have been accustomed to see it stopped at once by a full opiate given on the first day of its appearance. Let the patient avoid food after dinner, use liquids sparingly, take a full dose of muriate of morphia, or Battley's solution, at bed-

time, and breakfast before getting up next morning,—and he will then commonly find the secretion of the nostrils permanently inspissated, and the complaint either gone entirely, or at any rate no longer a source of particular annoyance.

During the same period, I have often seen a common *catarrh without fever* cut short in like manner, if taken on the first, second, or perhaps even the third day. Or more generally it seems to pass at once over the intervening stages to that in which thick sputa are coughed or hawked up without labour, and without irritation in the chest or wind-pipe. *Febrile catarrh* too may be checked abruptly in the same way, if the patient and physician are lucky enough to meet during the first or second day at farthest. But here probably the next mode of employing opium is fully more successful. I have also repeatedly seen epidemic *influenza* thus checked at the outset,—the local inflammation vanishing, while the strange lassitude, listlessness, and ennui, so characteristic of this disorder, went on as usual for some days during convalescence.

Although an authority so recent and so eminent as Mr. Pereira states, that "in *dysentery*, opium can only be used beneficially in the latter stages, and then with great caution" (Mat. Med. 1303), this is another and more formidable malady, which, if I mistake not, may be added to the mucous inflammations capable of being cut short in the early stage by opium. I doubt whether Mr. Pereira's doctrine will be received at all as a general proposition. There is not a better way of treating an ordinary mild dysentery at the commencement, than by the familiar practice of alternate opiates and laxatives. But—what is more connected with the matter now chiefly under review,—is severe epidemic dysentery, as it occurs at times in this country, the cure, when early begun, may be commonly trusted, if I may rely on my own experience, to opium alone,—not used, however, "with great caution," but given boldly and often.

2. The method of using opium along with ipecacuan as a sedative, anodyne, and sudorific, in the early stage of acute inflammations, is probably applicable to a considerable number of diseases of the kind. Those alone in which I have employed it are common sore throat, catarrh, and acute rheumatism.

From frequent observation, I am inclined to think that there are few cases of *acute cynanche tonsillaris*, which may not be cut short at the outset by this treatment, if they are subjected to it about the close of the first, or at all events, before the close of the second day. Of several instances I have met with to this effect, the following are examples. A lady, rather subject to febrile cynanche tonsillaris, was attacked with rigors in the evening, and sore throat during the night. Next day the right tonsil was much enlarged and red, and the posterior palate and velum red and thickened,—the pulse at the same time being 120, and sharp, and the febrile oppression considerable. In the evening, and therefore within the first twenty-four hours, ten grains of Dover's powder were given at intervals of half an hour, till half a drachm was taken. Perspiration, which soon broke out gently, was kept up for fifteen hours by warm drink. In twenty hours after the powders were taken, the pulse was seventy, the pain in swallowing gone, and the swelling and redness insignificant; and on the subsequent morning she was able to leave her bed. This attack happened eight years ago at least, and the disease has not returned since. A lady, about thirty-eight, long a martyr to cynanche tonsillaris,—which, in particular for three years before, had returned during the winter, ended in abscess of one or both tonsils, occasioned great and protracted torture, and had left chronic enlargement of these glands,—was attacked in the same way for the fourth time. When I first saw her on the fourth day of the disease, the tonsils greatly enlarged, especially on the left side, blocked up nearly the whole throat. She spoke with much difficulty, could not swallow without long, painful, and repeated efforts, and breathed noisily and with labour. The pulse was 116, full and soft. The febrile oppression and anxiety were great. A large blister had been applied to the throat and purgatives taken freely, but without the slightest benefit. The attack seemed too far advanced to be arrested. But as fluctuation could not be detected in the larger tonsil, Dover's powder was ordered as in the former case. Sweating ensued; ere long, warm drink could be swallowed with no great difficulty; and when the perspiration had thus been kept up for twenty-four hours, the pulse had fallen to sixty-four, the swelling of both tonsils had materially subsided, and the febrile anxiety

had ceased, together with the local uneasiness in a great measure. In two days more there was little complaint left except weakness. In the course of time the chronic enlargement of the tonsils disappeared; and this lady, like the last, has never had another attack, though five years have elapsed since the one now described. The tendency to cynanche tonsillaris, certainly seems to grow with its repetition in a severe form; and I have met with other instances besides these two, where an abrupt early cure seemed to break both the attack and the liability. The only objection, or rather obstacle, to this plan of cure is, that patients unluckily will seldom put themselves in the way of profiting by it; as the practitioner does not often see febrile sore throat, till the chief question he has to consider under the head of treatment is, whether an abscess in the tonsil is to be opened by nature or the lancet.

I have seen *febrile catarrh* quickly arrested in the same way in persons prone to it. But the circumstances have been so similar to those just described, that a detail of them here seems unnecessary.

Whether *acute rheumatism* may be also treated successfully by the like means, is a matter of doubt. At the period at which medical men generally first come in contact with a case of it, sweating by Dover's powder will not succeed singly. But this is a powerful and speedy measure, if immediately preceded by general blood-letting. Perhaps, then, the present topic would be better deferred, and taken up under the next head. But since it is the action of opium as a sudorific, which seems here the source of its curative influence, while in the third mode of using it for arresting acute inflammatory diseases, this kind of action is not at all essential, the treatment of rheumatism will be more conveniently disposed of in the present place.

There are physicians of undoubted authority, who maintain that acute rheumatism can scarcely be cut short,—that, do what one may, the patient must endure towards three weeks of agony, and three weeks more of stiffness, weakness, and occasional aches. I am convinced, however, that at least in young adults of sound constitution, a genuine acute attack may often be put an end to in a few days, by first drawing blood very freely to the approach of faintness, and then giving Dover's powder instantly afterwards in the way men-

tioned above for inflammatory sore throat. I have often observed, that after sweating has been thus brought out and kept steadily up for thirty-six or forty-eight hours, the pulse fell to the natural standard from nearly double that rate, the white thickly-furred tongue began to clean, the pains and redness gave place to numbness and want of power, recovery went on afterwards swiftly and without interruption, and the patient was able to leave his bed in a week. The chief conditions for success are, that the bowels, previously opened if necessary, shall be let alone till the sweating is well over; that blood be drawn both largely and to approaching syncope; that the powders be given immediately afterwards, before the circulation recovers its state of excitement, which it will otherwise soon do; that the treatment shall be enforced before the close of the fourth day, but earlier if possible; and that the case shall be real acute rheumatism, not one of the subacute form or gouty rheumatism, as it is called,—where for some days previously the local inflammation has been shifting from joint to joint, with irregularly intermitting fever. I have once or twice tried to do without the preliminary blood-letting, but have not succeeded. In one instance, that of a stout young cabinet maker, copious sweating begun on the third day without blood-letting, and maintained for eight-and-forty hours, was of no avail; but when repeated after one free evacuation of blood, it put an end to the disease abruptly in the way just described.

3. The treatment of acute internal inflammations by opium after blood-letting is now currently used by some practitioners. But since, notwithstanding its efficacy, it is still not generally practised, it seems to need the support of further testimony than it has yet received from the few who have taken public notice of it.

This mode of cure consists in withdrawing blood very freely from the arm till faintness approaches, just as in the ordinary way of treating acute inflammations,—and then giving a large opiate, with a view to bring on sleep or the calm reverie which in some people takes the place of sleep. The result is, that, on the patient awaking, the general fever and local inflammation are found to be subdued and broken,—generally at once, but sometimes not till the repetition of the practice in twelve or twenty-four hours.

The conditions for successfully employing opium after blood-letting are nearly the same with those for using Dover's powder in rheumatism. It is essential that the disease to be subdued be in its early stage; that a deep impression be made on it by blood being withdrawn both freely, and to the approach of faintness; and that the opium be given largely and immediately so as to anticipate the renewal of reaction. Sweating sometimes ensues, but is not at all a necessary condition for success. The particular preparation of opium to be used, is perhaps of no great consequence. I prefer the solution of muriate of morphia, or, failing that, the sedative solution of Battley. The dose of the former should not be less than forty minims for an adult male and for others in proportion; and the dose of Battley's solution, which is certainly not so strong as its maker represents, should not be less than twenty-five or thirty minims. Some conceive this treatment applicable only to inflammation of membranous surfaces, not to that of parenchymatous textures. I do not know any positive facts either on one side or the other of this question; but the statement is doubtful, if it be meant to apply to acute parenchymatous inflammations in their early stage. If pneumonia be regarded as inflammation of a parenchymatous tissue,—which, although a common mode of viewing it, is rather incorrect,—then, there can be no doubt that in this particular instance the treatment is most effectual on many occasions.—*Edinburgh Monthly Journal of Medical Science, Feb.* 1841, *p.* 91.

18.—ON HEMORRHAGE.

By Dr. Watson, Lecturer on the Practice of Physic, King's College, London, &c.

When blood rushes out from internal parts, through any of the natural apertures of the body, the person is said and supposed to have *broken a blood-vessel.* Yet this is rarely, though it is sometimes the case. In nine cases out of ten, if there be any rupture at all, it is rupture of numerous capillaries only: but even of this there is often no evidence.

Whence then, and how, does the blood escape from its natural channels? Why, it exudes from the unbroken surfaces of organs, without any appreciable lesion of arteries, veins, or capillaries; just in the same manner as sweat oozes

from the skin, mucus from the inner surface of the bowels, and serum or synovia from the membranes that respectively furnish those fluids; and probably by the very same outlets.

This certainly is a very remarkable circumstance, if it be true: and you will naturally ask what proof we have of its truth.

The proof is simple and conclusive. We examine the surface from which the blood must have proceeded, and we find it entire: we wash and even macerate it; we employ the microscope to assist our powers of vision, yet we fail, after this careful inspection, to discover the slightest breach of substance, or any appearance of erosion.

We have absolute proof, therefore, that hemorrhage may transude through an uninjured surface: nay, in some rare cases, the process has been actually witnessed. There are well authenticated instances on record of *cutaneous* hemorrhage; where a dew of blood has appeared upon some portion of the skin, has been wiped away, and has reappeared; and that again and again, without any perceptible alteration of the affected surface beyond some occasional variation in its colour. So again the menstrual discharge has been seen to issue *guttatim* from the healthy surface of a living and inverted uterus. But I confess, that although this analogical fact helps our conception of the manner in which blood may be exhaled from an unbroken membrane, I should not lay much stress upon it for any other purpose. It is not exactly a case in point. The process of menstruation cannot be looked upon as a morbid process. During a certain portion of the life of an unpregnant female, it is not only consistent with perfect health, but even essential to it, and the fluid poured out is not strictly blood.

When blood thus exudes, we say that the hemorrhage takes place by *exhalation*. It is a convenient word, and will spare circumlocution. What the vessels or outlets to which we give the name of exhalants really are; whether they be branches from the capillaries not large enough in the natural state to admit the red particles, or whether they be mere pores in the sides of the capillaries; these are points concerning which we have no positive knowledge. We know, indeed, that such channels must exist, though we cannot demonstrate or see them; and we know that while every part

of the body is in a state of health and integrity, they do not allow the blood, as such, to pass through them.

I must exclude, however, from this general statement one very important hemorrhage. In the brain, the former exception becomes the rule. In almost all cases cerebral hemorrhage results from the rupture of a blood-vessel.

Is it in all cases of hemorrhage proper or safe, to attempt to stop the bleeding?

Without going into detail, it may, I think, be laid down as a rule, that what I have called habitual hemorrhages ought not to be interfered with, so long as they have no perceptible injurious influence on the health, and so long as they proceed (as they mostly do) from parts, of which the *structure* is not likely to be spoiled, nor the *function* impaired, by the repeated passage of the blood. The most common seat of these habitual hemorrhages I have stated to be the rectum;—to which the two conditions just mentioned are, fortunately both of them applicable. Epistaxis supplies a less frequent example of the same kind. When they deviate from their usual channel, and are transferred (as it were) to some more important organ, it will generally be right, among other remedial measures, to endeavour to *recall* the original hemorrhage. It is very seldom that the metastasis takes place *for the better*,—i. e. from a part where the bleeding is attended with danger, to one where it is comparatively harmless.

However, when these habitual hemorrhages happen, as they often do, in plethoric persons; and when they are urged and kept up, as they frequently are, by intemperate and luxurious habits; we ought not to content ourselves with merely looking on. Hemorrhoids often perform the office of a safety-valve in such persons; and there are many who have what are called bleeding piles, and who would rather continue to have them, than submit to any change in their mode of life, or to the employment of other means of evacuation. Certainly these are cases in which nothing should be done to stop the bleeding; yet such patients ought to be told that the hemorrhoidal discharge is but a precarious, and often an inadequate relief of the plethora; that while the plethora is suffered to exist there is danger of a cessation of the piles, and of the supervention of serious or fatal affections of other parts, and especially of the head. Apoplexy, or cerebral hemorrhage, has

frequently been known to follow hard upon the suspension of constitutional hemorrhoids. The patients should be admonished also that the discharge of blood from the vessels of the rectum may become excessive; that if it be aggravated by exercise, or in any other way, it may lead to inflammation about the anus, and to great inconvenience; and that there are safe and tolerably sure methods of getting rid of the plethora (which chiefly constitute the danger of such cases), if they will submit to the observance of them. It is in the intervals between the hemorrhages that the danger of which they are in some sort the token, may best be met.

Of the actual remedies used for checking the farther escape of the blood, one of the most important has already been alluded to—I mean venesection. We are guilty of homœopathy in this matter: to prevent bleeding, we draw blood. After what was stated respecting the use of blood-letting in inflammation, I need not dwell upon the objects aimed at by this measure: they are briefly, to abate the vigour and force of the heart's contraction, to lessen general plethora when it exists, to remove local congestion, and to divert the current of the blood from the suffering organ.

Next to blood-letting, *astringents* constitute the great resource against actually existing hemorrhage: and among these *cold* is one of the chief. It may be placed in direct contact with the bleeding surface:—as when ice is *swallowed* to restrain hæmatemesis: or cold water injected into the rectum in excessive and exhausting hæmorrhoids; or into the vagina, in flooding from the uterus. Or it may be applied to the surface of the body, as near as possible to the seat of the hemorrhage; as to the nose and forehead in epistaxis; to the chest in hæmoptysis; to the epigastrium in hemorrhage from the stomach; to the lower part of the abdomen or to the perineum in hemorrhage from the intestines, uterus, or urinary organs. But the influence of cold in constringing the smaller vessels is not confined to the part with which it is in contact; it will stop hemorrhage by the sympathetic shrinking which it produces in distant parts. Epistaxis, for example, has often been arrested by the sudden apposition of cold water to the neck, back, or genital organs. The nursery remedy consists in slipping a cold key down the back between the clothes and the skin.—*Med. Gazette, Jan.* 1, 1841, *p.* 529.

[Dr. Watson makes no mention of ipecacuanha and other nauseating medicines in arresting hemorrhage. A very interesting paper on the use of ipecacuanha will be found in our first volume, (Art. 12), by Mr. Trenor: and we can safely corroborate most of the statements therein made. Ipecacuanha will be found a safe and most efficacious remedy in most cases of internal hemorrhage. It must be given in grain doses, every half-hour or every hour, till nausea is produced; and the patient should be kept in this state of nausea for some time. It has all or most of the good effects of venesection without its bad effects.]

19.—TREATMENT OF VARIOLA BY MERCURIAL APPLICATIONS.

By I. F. Olliffe, M.D., Paris.

[Various have been the methods of preventing the formation of cicatrices in small pox; but all have more or less failed. The methode ectrotique of Brettonneau was cauterization. He "pierced the summit of each pustule with a gold or silver needle charged with a small portion of lunar caustic in powder." M. Serres applied a strong solution of nitrate of silver, from 15 to 45 grains to the ounce, to the whole surface of the eruption. Dr. Picton, of New Orleans, treated his patients by keeping them in complete darkness, and, as he states, with success. But mercury seems destined to supersede all other therapeutic agents in this malady. M. Serres and M. Briquet have been most successful in preventing cicatrization by the use of plaster of vigo, composed according to the French pharmacopœia of the following:

Mercure	95 parties.
Styrax liquide	48 „
Emplatre simple	312 „
Cire, resine, terbinthine, aa 16	
Gum ammoniac, bdellium, encens et myrrh, aa 5.	
Safran	3 parties.
Esprit de lavaud	2 „

M. Serres draws the following conclusions.]

1. The plaster of Vigo cum mercurio produces a complete abortion of variolous pustules.

2. Diachylon, porphyrised charcoal, gum arabic in solution and all other topics hitherto applied (with the exception of litharge), with the intention of causing this abortion, have completely failed.

3. The abortion takes place, not only when the pustules are yet in a state of papulæ, but even when they are in full suppuration. (Here I must differ from M. Serres, for M. Briquet's researches prove that the appearance of the pustules in the suppurating state renders the effect of the mercury altogether void).

4. The abortion takes place by a process totally different from that which is effected in *varioloid* affections. In the latter it is to be attributed to the prompt desiccation of the *vesicle*, whilst in variola the pimple does not open at all; no pus appears, no scales are formed; resorption is effected, and consequently, no scar can possibly occur.

5, and lastly. The greater part of the body should be covered with the mercurial plaster.

Mercury, as a topic, ought to be employed in all the varieties of small pox, whether simple, confluent, or modified. Its effect is either to prevent the development of the pustules, or so to modify them that they become mere abortions. The whole face should be covered with a mask of Vigo plaster, merely leaving a space for the mouth, nostrils, and eyes. A little mercurial ointment is applied to the eyelids. By the application of these plasters, the exanthem either undergoes entire resolution, or is converted into *vesicles* or tubercles. The resolution is either primitive or secondary. The former takes place when the eruption is still papular; so that the papulæ, which, without the application, would have passed into pustules, disappear completely under its influence. The plaster often, indeed generally, changes the nature of the eruption, by converting it into a vesicular or tubercular form. When it assumes the vesicular form, it differs little in appearance from herpes;—the vesicles contain a lymph-like serosity, and are surrounded by a light red areola; and a most remarkable circumstance is, that the skin between the insulated vesicles is pale, and never swollen and red, as it is in small-pox. *No suppuration ever takes places.* A day or two after the removal of the plaster the vesicles dry up, without any desquamation; and as for cicatrices, M. Briquet has never seen any form after his treatment. He totally differs from M. Serres respecting the utility of the plaster when the eruption has become pustular. The plaster is allowed to remain for three days in simple small pox, and for four in confluent.

Frictions, with mercurial ointment, may be substituted for the Vigo plaster; and they are, in fact, quite as efficacious; but they must, as in all other cases, be performed before the eruption assumes the pustular form.—*Lancet, Feb.* 6, 1841, *p.* 676.

It would appear from the experiments of Dr. Midaveine, that sulphur possesses the same efficacy as mercury in arresting the development of the small-pox pustule. Dr. M. employs an ointment composed of two to two and a half drachms of flour of sulphur to an ounce of lard, and with this rubs lightly, thrice a day, all parts of the body on which pustules exist. The nearer the pustules are to the period of their first appearance, the greater the chance of success; the papulæ then contract, become dry, and fade away. Even in confluent small-pox the patient quickly recovers his appetite, and asks for food. We should, however, remark that Dr. Midaveine employed the sulphur ointment in sixteen cases only, and of these twelve had been vaccinated.—*Provincial Medical and Surgical Journal, April* 24, 1841, p. 80.

[Gold-leaf is used for the same purpose by the Egyptians and Arabs as related by Baron Larrey. They cover the parts with gold-leaf as soon as the eruption makes it appearance. The Baron found almost a similar good effect from repeatedly anointing the face with almond oil. The account is as follows:]

On the employment of Gold-leaf for the prevention of pitting in small-pox.—Baron Larrey communicated to the Academy an interesting notice of a practice which was prevalent amongst the Egyptians and Arabs by which they prevented the unseemly scars produced on the exposed parts of the body by the suppurating of the small-pox pustules. The practice consisted in covering the exposed parts of the body, as the face, hands, and feet, with gold-leaf as soon as the eruption made its appearance.

M. Legrand bears testimony to the efficacy of the practice, having tried it in one case, which he relates. The patient was a beautiful English girl, who had a copious eruption of confluent small-pox. On the first day of the eruption the whole of the face was covered with the gold-leaves, which were made to adhere by means of gum water. The application was renewed morning and evening so long as the sup-

purative fever continued; and when the cure was completed, not a pit or scar was left on the face where the gold-leaf had been applied. The hands, and the rest of the body which had not been thus protected, were deeply marked with the scars of the pustules.

Baron Larrey says that he has found nearly the same beneficial results to follow from the repeated anointing of the face of the person labouring under small-pox with almond oil; a practice which recommends itself from its cheapness and the facility of its application.—*American Journal of Medical Science, Feb.* 1840, *p.* S53.

20.—*Pure Tannin a Remedy for Excessive Perspiration.* By Dr. CHARVET.—Sweating is a morbid symptom which is so often so serious and inconvenient, that the practitioner is obliged to combat it by special remedies. The acetate of lead, which has been extolled of late years, sometimes causes inconveniences which hinder many practitioners from employing it in cases where its use seems clearly indicated. Pure tannin, employed as an anti-sudorific, appears to be free from these advantages. The author has employed it for two years at the hospital, and in his private practice, and though it has not succeeded in every case, it has in almost all.

He prescribes it in the form of pill, and in the dose of from two and a half to ten centigrammes (half a grain to two grains) in twenty-four hours, generally in the evening, with or without opium, which neither checks nor favours its action. The first time he administered it was in the case of a phthisical patient, who was already in a state of marasmus, and whose cough, fever, and oppressed breathing, were less troublesome than the general perspiration with which he was inundated every night. The patient asked for some medicine against the perspiration, which he considered the sole cause of his sufferings, and was ordered twenty-seven milligrammes (about three-fifths of a grain) of tannin. The next morning he said he had passed a good night, and hardly felt moist when he awoke. The repetition of the same dose every evening was sufficient, during several weeks, to suppress the perspirations entirely; but they returned as soon as the medicine was omitted. The dose was raised to five centigrammes

(a grain), and then to eight (one grain and three-fifths), and always with the same success. The author relates several other cases in support of the anti-sudorific property which he attributes to tannin; they occurred among consumptive patients who had arrived at the last stage of the disease. They are additional examples of the activity with which tannin suppresses sweating, even when the disease from which it arises is beyond the resources of our art.—*Med. Gazette, Nov.* 27, 1840, *p.* 382.

21.—*On the Detection of Albumen in the Urine.* By Dr. Rees.—[Dr. Rees was one of the first to show that coagulation of urine by heat alone is not a sufficient proof of the existence of albumen. He shewed that it was necessary for nitric acid also to be present. Urine may contain albumen and yet not be coagulated by boiling, because of the presence of an alkali, and yet on the addition of nitric acid a copious precipitate may be produced. Both nitric acid and heat are therefore essential concomitants in testing the presence of albumen. Dr. Rees proceeds in his paper to state:]

From what has been premised it is evident that a knowledge of the acid or alkaline condition of any given specimen of urine can in no way assist us in determining whether or not it contains albumen, by applying the test of heat alone, if a *positive* result be obtained; for the coagulum may be caused by the earthy phosphates, whether the urine be alkaline or acid; but the case is different when the result is *negative*, since acid urine never prevents the precipitation of albumen by heat, though alkaline urine may, and, therefore, a specimen, if shown to be acid, and not coagulable by heat, may safely be declared free from albumen. This fact, if borne in mind, will frequently save the practitioner much trouble, as it is not always convenient to carry nitric acid to the bedside of a patient.

Having stated the fallacies to which the test of boiling is subject, I shall proceed to those which render uncertain the indications afforded by nitric acid. It has been long known that where the lithates exist in urine in excess, that the addition of a small quantity of a mineral acid will occasion the deposit of lithic acid; but this is almost always of a brownish red colour, and in no way simulates in form or character the

precipitate of albumen as produced by nitric acid, and cannot well be mistaken for it. I mention the fact, however, as part of the history of the subject. Nitric acid is frequently used to discover whether the precipitate afforded by heat be albumen or not, by adding it to the still warm liquor containing the coagulum obtained by boiling. In these cases, even if the precipitate be albumen, it is occasionally lost sight of by the uninitiated experimenter, and supposed to be dissolved, though in reality it remains suspended. This mistake arises in one of two ways; either the flocculi (which generally become darkened or corrugated) are carried up into the froth occasioned by the effervescence which occurs on the addition of nitric acid to the heated urine or these corrugated flocculi (when the effervescence has not been so strong) remain in their altered condition in the fluid, and are entirely overlooked by a careless or hurried experimenter. I should not have mentioned these sources of error, which might naturally be considered improbable, but that I have more than once had occasion to observe their occurrence, and that too in the hands of practitioners not altogether unused to the test tube and spirit lamp. The last source of fallacy that I shall mention, is one which has led to one of those loose unsupported assertions in which our profession abounds, and which have not failed to attack the important discovery of Dr. Bright, by declaring that albumen exists iu many conditions besides in the form of diseased kidney which he has described. That this may be the case is certainly not quite impossible; but the facts which have as yet come under my observation, in support of such an opinion, have proved to be as imperfect as that to which I have above alluded, viz., that patients who take copaiba have always an albuminous condition of urine induced. This statement has, I presume, originated in the fact that when copaiba has been taken (and more especially in an alkaline vehicle) the urine becomes coagulable with nitric acid: at least I have found it so in four consecutive cases which I have examined, and the cloudiness produced bore a great resemblance to albumen, and might be easily mistaken for that principle. These specimens, however, were not coagulable by heat, and were acid—a fact which alone might have assured the observer that albumen was not present.—*Medical Gazette, Dec.* 11, 1840, *p.* 438.

22.—*Vaccine Crusts, the most Effectual Packages for Vaccine Virus.*—[The following facts will be more especially interesting to medical men who reside in warm climates. To all indeed it will be interesting. The first quotation is from Dr. Epps, Medical Director of the Royal Jennerian and London Vaccine Institution, who states:]

The vaccine pock is similar to the *vitreous* humour occupying the largest portion of the chamber of the eye. It is a compages of vessels with their contained fluid. The *aqueous* humour of the eye escapes by a single puncture, like the virus of the vaccine pock: hence the indurated pock, the scab or crust of the vaccine pock, contains the dried matter in its cells, which, being broken down, and moistened with the wetted point of the lancet, has been found effective in hot climates, when attempts to preserve the vaccine ichor in other forms have failed. The crusts or scabs we have been able to collect in this country, we learn, by letters from the East and West Indies, have withstood the heat of their vertical sun, and spread protection through the plantations, and the surrounding districts.

N.B. These crusts, when levigated and moistened, and worked into a fine pulp, have been used by many practitioners in tropical climates with the most signal success. Mr. Johnstone, the late secretary of the Institution, was the first who suggested this plan.

Then follows a letter from M. Merguera, connected with the embassy of New Granada. He says:]

Knowing that you will feel pleasure in witnessing the results, in the Republic of New Granada, from the different kinds of pus destined to preserve from the small-pox, which your institution had the kindness to transmit to me last year, and which I transmitted forthwith to my government, I have pleasure in forwarding to you the information I have received.

In the month of March, 1840, an epidemic small-pox broke out in the city of Popayan and in the province, and continued even till August. The matter, forwarded upon my application to you, was immediately employed, and the following are the remarks connected with its use:—

The trials, made with the *pus contained between glasses*, and with that attached to *the ivory points*, were *unattended* with *any good effect*; but the case was different with the *crusts*. These broken down (see above), produced the most happy

results, and realized pustules having the character of the true vaccine. Great numbers were vaccinated with these, so prepared, in Popayan, and *all with effect;* and this beneficial remedy is now adopted with efficacy every where.

It is necessary to add, that *a* vaccine pus, which *already existed at Popayan*, produced pustules, but it did *not* produce pustules having the good characteristics which were presented by the pustules in question, &c., &c.

Towards the end of July, upwards of 600 individuals had been vaccinated; and although these were continually in contact with those affected with small-pox, not one took the contagion, &c. &c.—*Lancet, March* 13, 1841, *p.* 848.

23.—*Hydriodate of Potass and Sarsaparilla in Chronic Rheumatism.* By Dr. James Heygate, Physician to the Derbyshire General Infirmary, &c.—[We give the following case chiefly because it confirms the value of Dr. Graves' use of the same means in similar cases, as given in Art. 93, of our second volume.]

Elizabeth Holmes, æt. 43, admitted in-patient Aug. 21, 1837. Pain with loss of power in the lower extremities; knee-joints much swollen, and have been so for many months, with inability to stand; pulse quick, tongue clean, bowels confined. She says various means have been used, but hitherto without any effect.

℞. Hydriodate of potass, gr. vj.; compound decoction of sarsaparilla, ℥ ij.

To be taken three times a day; and a pill, composed of extract of rhubarb, extract of conium, and blue pill, of each two grains, every night.

23. The same. A vapour bath to be used every other day, and the turpentine liniment to be applied to the limbs.

28. Improving. Increase the hydriodate of potass to eight grains.

30. The medicine agrees very well; the joints not so stiff, less painful, and less swollen. To have crutches.

6. Limbs more pliable. Increase the hydriodate of potass to ten grains, and substitute the camphor liniment for the turpentine.

23. Has continued improving since last report. Increase the hydriodate of potass to fifteen grains.

27. Gums slightly turgid. Omit the pills.

30. Joints reduced to almost the natural size. Can now walk about tolerably well. To be made an out-patient, and gradually leave off the medicine.—*Lancet, March* 6, 1841, *p.* 820.

[Several other illustrations of the value of this compound are given by Dr. Heygate, as "Secondary Syphilis," some "Severe affections of the wrist-joint," and, "Neuralgic affections of the loins with loss of power in the lower extremities."]

24.—*Treatment of Gouty Concretions with Benzoic Acid.* By Alexander Ure, Esq.—[This paper was read before the Royal Medical and Chirurgical Society. The substance of it is as follows:]

The author's intention, in the few remarks contained in this paper, is to introduce to the profession a remedy, which he believes to be likely to prevent the formation of tophous concretions in gouty subjects. The remedy is benzoic acid, administered in doses of a scruple, an hour after a meal.

"In the course of a couple of hours (as the author has found by frequent experiments, made upon himself and others), the urine voided, amounting to five or six ounces, will be found on adding a small quantity of muriatic acid, to yield a copious precipitate of beautiful rose pink acicular crystals, which weigh, after being allowed to settle for a day, fifteen grains." The body thus produced by the agency of vital chemistry is hippuric acid, and is found to have taken the place of uric acid in the urine, none of the latter being discoverable.

By thus substituting hippurate of soda, a salt of easy solubility, for the very sparing soluble urate of that alkali, the author conceives that the formation of the tophous concretions may be altogether prevented.

Mr. Ure stated, in answer to questions, that he had employed the plan recommended in his paper in two or three cases with decided success. He had not found the dose, twenty grains, to be at all too large, and had frequently taken it himself without any unpleasant effects.

Mr. Coulson thought the quantity of benzoic acid mentioned by Mr. Ure, too large a dose to exhibit, or, at least, to commence with; he was occasionally in the habit of giving this

medicine in purulent secretion from the kidney, for which affection it was a valuable remedy, but he never began with a larger dose than three or four grains.

Dr. Kingston remarked, that the class of remedies to which that recommended by Mr. Ure belonged was one of much importance. Gouty persons were liable to concretions, not only in the joints and bursæ, but also in internal organs: the obstruction of which, if not more inconvenient, was far more prejudicial to life; as for instance, the aorta and valves of the heart. Independently, also, of gout, there was a calcarious diathesis, under the influence of which he had often known a great number of organs at once occupied by concretions, extensively encroaching on their structure. If concretions of the joints and bursæ could be removed by one chemical remedy, we might hope to find some other of this class capable of removing the internal calculi.

25.—*Treatment of Acute Rheumatism with Cinchona Bark.* By Dr. D. Davis, Professor of Midwifery in University College, London.—[Dr. Davis first traces the history of the use of this remedy, employed by former celebrated practitioners, as Morton, Hulse, Fothergill, and Haygarth. He then shows the almost complete modern neglect of the remedy, and endeavours to impress upon his readers its value in cases of acute rheumatism: many of which cases, he thinks, bear great resemblance to ague. With respect to this treatment he says:]

I have adopted it during the greater part of my professional life: and as it has seldom happened that I had ever occasion to prescribe it, except at an early period of acute rheumatism, I have great satisfaction in assuring the readers of The Lancet that I do not remember a case in which the disease was not happily subdued. I have often recommended it in cases of pure arthritic rheumatism during its acutest stage, and the disease has always yielded to the remedy; and I have always recommended it in violent pains of the joints, accompanied by alarming complications, but never in any one case injuriously to the interests of my patient. I have, therefore, no difficulty in recommending its adoption to my medical brethren, and especially to those who are most fre-

quently favoured with the opportunities of seeing acute rheumatism in its earliest stages. From what I have already written upon the subject, I think it will be considered that its employment should, in every case, be anticipated by free abstraction of blood, as well as by the other important evacuations previously recommended to be resorted to. In a few cases it may be necessary to repeat such bleedings and other evacuations more than once; but I must own, that such a necessity has not often occurred within my experience. I feel myself entitled once more to repeat my confident assertion, that I consider the Peruvian bark the most powerful remedy that can be employed in an incipient case of acute rheumatism. Without exception in my practice, it has uniformly produced the most salutary effects. The pains, swellings, perspirations, and other symptoms of inflammatory fever, manifestly and speedily abate, and gradually cease, till health is perfectly restored. Before I conclude I beg to repeat that the measure of bark which it has been my practice to recommend for the disease under consideration, has varied between a scruple and half a drachm, repeated three or four times daily.—*Lancet, Feb.* 13, 1841, *p.* 722.

26.—*Treatment of Diarrhœa in Infants.* By M. Trousseau.—In the diarrhœa to which infants are often subject, when unaccompanied by fever or other signs of inflammatory action, M. Trousseau recommends the following enema:—nitrate of silver, one to three grains; water, twelve and a half ounces. Or the nitrate of silver may be given in solution, thus:—nitrate of silver, one to two-fifths of a grain; water, thirty scruples; simple syrup, thirty scruples. Five or six tea spoonfuls to be taken in the twenty-four hours.—*Provincial Medical and Surgical Journal, Jan.* 9, 1841, *p.* 255.

27.—*Ileus Cured by Injection of Air.*—A dragoon was seized with violent colic and symptoms of intense enteritis. An antiphlogistic treatment was employed without any benefit. The bowels soon became obstinately constipated, and he vomited stercoraceous matter; some mechanical obstacle was now supposed to exist. A quantity of air was thrown up the

anus, and as soon as the intestines became well distended, a copious evacuation of solid fæces took place. This was soon followed by other stools; the vomiting now ceased, and the man quickly recovered.—*Med. Zeit.*, No. 35.—*Ibid, Jan.* 16, 1841, *p.* 258.

28.—ON FUNCTIONAL DERANGEMENT OF THE HEART IN GROWING PERSONS.

By Dr. Corrigan, Lecturer on the Practice of Medicine; Physician to Jervis Street Hospital, &c.

This affection is met with in both sexes; but we are most often consulted about it occurring in boys, probably from their active exercises rendering the attacks more observable.

The boy, often taken home from school from the alarms caused by it, has observed that an attack of palpitation has occurred when out walking, or exercising with the other boys. In some instances, although not common, the first attack has occurred at night. The attacks gradually become frequent, and at last so violent, that he is obliged to abstain from exercising, or if exercising, is forced to sit down. These attacks are renewed whenever he attempts a repetition of exercise, and at last he dreads even walking. He is now prevented from joining his companions in their sports; this preys on his spirits, and after confinement in his study, or sedentary occupation at his desk, very slight exercise, sudden rising even from a chair is now sufficient to bring on an attack, and take away his breath. The attacks then begin to come on at night, or in lying down; or are produced even by any change of posture. In some of those cases there is a disposition to bleed from the nose, and the hemorrhage is occasionally very profuse, and this, coupled with pain of the side, which is occasionally present, leads to a treatment not calculated to amend the symptoms. The boy is denied animal food. He is sent to the infirmary of the school, and given tartar emetic and bled, or lowered in other ways by purgative or nauseating medicine. He is at last sent home, and the physician then sees him a boy very tall, or small and slight for his age, with little development of trunk, narrow chested, and with long thin arms and legs; and he is generally slightly bowed in the shoulders from some bending forward of the spine.

The pulse has become habitually quick, beating probably one hundred and twenty or one hundred and thirty in the minute; and on laying the hand over the region of the heart, the first impression made on the examiner is, that there is great hypertrophy of the left ventricle, as it is felt thumping over a large space, and apparently with great strength. A little further examination will, however, shew that this is a deception arising from a combination of causes. The contraction of the ventricle is *quick*, and hence the impression of it gives a more palpable impression to the hand than a contraction of equal strength, but slower. The chest being generally narrowed, or drawn in, the heart, as in females, lies with a greater extent of surface close to the ribs, and the hand of the observer feels necessarily the impulse over a larger space; and as this space increases, the hand laid over it will receive a corresponding increase of impulse, even though the strength of the organ be not increased, just as the hand laid over the large sac of an aneurism will, from increased extent of surface, receive a corresponding increase of impulse, even thongh the active force distending the sac is not greater than that exerted on a neighbouring artery, which gives an immeasurably less to the perception of the observer. The deceptive sensation produced on the hand, when the heart gives a large extent of surface of impulse, is very likely, if its cause be not remembered, at once to make the practitioner suppose, in such a case as that described here, that he has to deal with a greatly enlarged and powerfully acting heart, when the organ is really the very opposite of this as to strength of muscular fibre. It is, I believe, as a general rule in such cases, safer and better to judge of the strength of the heart by the force of the blood impelled by it than by any indication of its state supposed to be furnished by auscultation of its action. It is, I believe, also more rational to judge of the power with which the organ acts, (except in its obstructions of its orifices), by feeling the force of the fluid sent out by it along the main trunks, than by drawing an opinion from degrees of intensity of sounds and impulse, on which, perhaps, no two observers will agree. It is more reasonable to judge of the strength of the action by the momentum of the propulsion than by the recoil of the organ, or the noise of its action.

There is in some of those cases a curious circumstance

observable; the boy who cannot run or walk a hundred yards without palpitation will swim for a very long time without being in the least incommoded by the action of the heart, probably from the spinal muscles not being disturbed with the weight of the trunk in the latter exercise; but whatever the cause, the occurrence is useful as an aid to our diagnosis.

[The treatment consists in diminishing the nervous irritability of the patient, and in restoring the tone to the constitution, by sea air, sea bathing, and full diet, with the different preparations of iron. The treatment of Case 2 is described as follows:]

He got three drops of hydrocyanic acid every night in ʒ i. mist. camph. and half a grain of sulph. quin. ter in die. The palpitations were rapidly relieved, but not removed. He was put upon full diet and wine, and in the course of the summer he recovered; the palpitations gradually wearing out.—*Dublin Journal of Med. Science, March*, 1841, *p.* 61.

29.—*On the Use of Pitch in Piles.*—Dr. Wardleworth assures us that he has used this remedy with advantage in many cases, both of external and internal piles. His usual formula consists in ordering three and a half grains of pitch to be made into pills, two of which are to be taken every evening. The well-known efficacy of balsamic remedies in piles may perhaps serve to recommend these pitch-pills.—*Med. Gazette, Jan.* 8, 1841, *p.* 588.

30.—*On Purgatives in Inflammation of the Brain and its Membranes.* By Dr. Watson, Lecturer on the Practice of Physic, King's College, &c.—[Bleeding and the application of cold to the head are so well known and valued in inflammations of the brain and its membranes, that we need hardly mention them. The use of strong and continued purgatives is perhaps as well known but not so regularly adopted. We, therefore, give Dr. Watson's and Dr. Abercrombie's recommendation of this practice in the following observations taken from Dr. Watson's interesting lectures, now being published in the Medical Gazette.]

The third remedy which I named, that is to say, purging, is also of great importance and efficacy. But it must be

hard purging. There is a great tendency to obstinate constipation in most cases; and this must be overcome, and free and frequent evacuations from the bowels obtained: five grains of calomel and fifteen of jalap should be followed in three or four hours by a strong black dose; and after that I should give, in such cases, three or four grains of calomel every four hours, and repeat the black dose at least every morning, until the symptoms gave way. If the mercury thus exhibited affects the gums, so much the better; but we must not, in this disease, combine it with opium, to prevent its passing off by the bowels. Dr. Abercrombie uses this strong language in reference to the value of purgative medicines in acute inflammation of the brain. "In all the forms of the disease active purging appears to be the remedy from which we find the most satisfactory results; and although bloodletting is never to be neglected in the earlier stages of the disease, my own experience is that more recoveries from head affections of the most alarming aspect take place under the use of very strong purging than under any other mode of treatment. In most of these cases, indeed, full and repeated bleeding had been previously employed, but without any apparent effect in arresting the symptoms." He has found the croton oil the most convenient medicine for this purpose.

Dr. Abercrombie is disposed to regard mercury as being useful in affections of the brain, chiefly in virtue of its purgative operation: and the opinions of a physician of his large experience, and observing mind, must and ought to have great weight. But I must not conceal from you my own persuasion that, in the early periods of acute inflammation of the encephalon (and it is of the early periods that I have hitherto being speaking), if the mercury comes in a short time to produce its specific influence upon the gums, a great change for the better will often be perceived; such is the result of my own observation. Recollect, however, that you are not to give calomel with the direct object of affecting the gums, but as part of the purgative plan, and you take the chance of its specific effect. You must not combine opium with it, for two reasons; first, you would thereby shut up the bowels, and deprive yourself of the use of one of your best weapons; and, secondly, you would incur the risk of augmenting and perplexing your patient's head symptoms, and

of puzzling yourself; since you would not be able to determine how much of the coma that ensued was owing to the progress of the disease, how much to your remedy.—*Medical Gazette, Feb.* 26, 1841, *p.* 820.

31.—*Burnt Rhubarb in Diarrhœa.*—By F. P. Hoblyn, Esq., Middlesex Hospital.—It may be useful to the profession to know the value of burnt rhubarb in diarrhœa. I have used it for seven years, and found it more serviceable in the diarrhœa, attendant on the last state of consumption, than the chalk-mixture and opium, or any other of the usual remedies.

I have known it used, with the same pleasing effects, for more than twenty years, in incidental diarrhœas. After one or two doses, the pains quickly subside, and the bowels return to their natural state. The dose is from five to ten grains.

The manner of preparing it is to burn the rhubarb powder in an iron crucible, stirring it until it is blackened; then smother it in a covered jar.

It looses two-thirds of its weight by the incineration. It is nearly tasteless. In no one case where I have known it given has it failed. I have given it in port wine, milk, and water.—*Lancet, Feb.* 27, 1841, *p.* 790.

32.—*Compression of the Carotids in Convulsive Affections.* By M. Stroehlin.—[From time to time we hear of the employment of the above means in certain cerebral affections. Still, however, it is very little practised. The following cases illustrate the method of treatment.]

"I have sometimes," says M. Stroehlin, "employed compression of the carotids in hysteric convulsions, and I almost always succeeded in modifying the form of the attack." The author adds the history of two cases of epilepsy, well characterised, where the employment of this means was followed by similar success. The first of these cases was that of a man 24 years of age, strong and vigorous, who had been subject to epileptic attacks for five years, and which were of daily occurrence, sometimes lasting two hours, and very violent; the compression of the carotids at the commencement of the attack always caused them to cease a minute afterwards.

The second case was that of a young person 15 years of age, epileptic from infancy, occurring every second day, and of six hours duration. The convulsions were confined to the right side of the face and the upper extremity of the same side. In this case he only compressed the left carotid, and the success was equally marked as in the former. It is necessary, adds M. Stroehlin, that the compression should be as circumscribed as possible, so that the returning current in the jugular vein be not interfered with. M. Stroehlin refers to cases where ligature of the carotid has been applied for the cure of epilepsy, for tumours of the face, for wounds of the artery itself; in which latter cases the patient had been previously epileptic, but when the operation was concluded, the convulsive affection disappeared.—*Archives Gènèral, de Med., March* 1841, *p.* 349.

33.—*On the Employment of Platinum.* By Dr. Hoefer.—*Physiological Action.* On dogs and rabbits of ordinary size, the perchloride and chloride of platinum and sodium produce death in several hours: on man, when any part of the body is rubbed with a concentrated solution of perchloride of platinum there is experienced in two or three minutes great itching in the part rubbed. The skin, coloured yellow by the application, soon exhibits red patches which disappear in a few minutes. Water will remove the yellow stain, as the epidermis is not destroyed; when taken internally it causes sensations of heat and weight at the epigastrium, occipital headache, constriction of the throat sufficient to affect the voice and swallowing, nausea, and attempts to vomit. The symptoms increase for a few minutes, but disappear in the space of half an hour. The chloride of platinum and sodium has no effect upon the skin, and its internal action is less than the perchloride of platinum; it appears to augment the urinary secretion.

Therapeutic Action.—The perchloride is to be regarded as an efficacious remedy in syphilis, especially of a chronic form. The chloride of platinum and sodium is more applicable to the recent forms of the disease. It is equally efficacious in rheumatic affections. Platinum must be ranked amongst the alteratives along with gold, arsenic, and iodine. It differs

from mercury in producing previous excitement of the system; and it does not cause the same serious accidents which often follow the use of that drug.—*Journ. des. Connais. Med. Chir., Jan.* 1841, *p.* 39.

34.—*Peculiar Mode of giving Mercury in Chronic Hydrocephalus.* By Dr. Watson, Lecturer on the Practice of Physic, King's College, London, &c.—An apothecary of considerable experience, now dead, once took the pains to write out and send me the particulars of two cases in which he had seen a peculiar mode of administering mercury successful. I will give you them nearly in his own words.

He had a lad, fourteen years old, whose name was Scott, under his care, with chronic hydrocephalus, in the year 1817. He had been ill two or three years. He was nearly blind, had very little use of his lower extremities, and could not walk across the room without support. He suffered violent pains in his head, and was unable to bear the least pressure on his scalp. His bowels were constipated, and his pulse "oppressed." Cupping and blistering, and the blue pill, and drastic purgatives, and ordinary diuretics, tried in combination and succession, gave him temporary relief; but no permanent benefit was obtained. Dr. Gower then suggested a plan which he had himself found successful in such cases, and which had first been used by Dr. Carmichael Smyth, who had recorded ten cases of recovery under its adoption. Dr. Gower's plan was to rub down ten grains of crude mercury with about a scruple of manna, and five grains of *fresh* squills; this was to be one dose; and it was to be repeated every eight hours.

My informant rubbed the quicksilver down with conserve of roses, and then added the fresh squills, making the whole into the consistence proper for pills, with liquorice powder. The patient took this dose three times a day, for nearly three weeks, without any ptyalism being produced. Its effects were great prostration of strength, and loss of flesh, with gradual relief of all the boy's sufferings. It operated profusely by the kidneys. The medicine was continued twice a day, and at length once for another fortnight; when all the symptoms of the disease had disappeared. The boy was greatly emaciated; he was then ordered an ounce and a half of Griffiths' mixture.

thrice daily; and soon regained his health and strength, and got quite well. And he remained well eight years afterwards.

The success obtained in this case led to the pursuance of a similar course in that of the son of a well-known fishmonger in Old Bond Street. He was about twelve years old, and afflicted in nearly the same manner as Scott, except that the pain in the head was more acute, and caused violent screaming; *relief* had been repeatedly given for a time, by cupping. The physician in attendance was unwilling to try the plan, when it was proposed to him, but said that he would give what was equivalent—small doses of blue pill, with squills in powder. The result was salivation in a few days, without any amendment. In about three weeks, the effects of the mercury having subsided, and the patient then suffering extreme pain in the head, loss of sight, and want of power over the lower extremities, my informant was desired to adopt any measures he thought fitting. The medicine was given as in the former case, and with the same happy consequence; it acted as before without producing ptyalism, but with a great reduction of strength and flesh: health was restored by steel, after the symptoms of hydrocephalus had disappeared. This cure also was permanent.—*Medical Gazette, March* 26, 1841, *p.* 1.

35.—ON SECLUSION, AS EMPLOYED AT HANWELL IN THE TREATMENT OF THE INSANE.

By Dr. Conolly, Resident Physician.

["Among the numerous misrepresentations that have gone abroad respecting the admirable improvements introduced into Hanwell by Dr. Conolly, there has been none greater than that which has converted the temporary and occasional seclusion of violent patients into an habitual system of restraint and punishment as severe and objectionable as the practices he has abolished. In order to expose the utter inaccuracy of such statements, we lay before our readers the section on Seclusion, from the report recently presented by Dr. Conolly to the county Magistrates; and we can testify from personal knowledge of the proceedings at Hanwell, that the practice of the Asylum is in strict accordance with the principles there laid down."]

Seclusion.—All the substitutes for restraint, are like restraint itself, liable to be abused; but none can be made such instruments of cruelty by abuse. All are also liable to great misrepresentation: and none more so than that which is of all the most useful, the most simple, and the most approved of by the highest medical authorities; namely, seclusion. By seclusion is meant, temporary protection of the maniac from the ordinary stimuli acting upon the senses in the refractory wards of a lunatic asylum. He is abstracted from noise; from the spectacle of a crowd of lunatics; from meeting those who are almost as violent as himself; and from every object likely to add to his irritation. But the mode in which seclusion is effected is also important to securing the benefits of it. If resorted to with violence, if accompanied with expressions of anger or contempt, if stigmatised as a punishment, and if followed by neglect, it may produce all the evil moral effects of restraint itself. If injudiciously persevered in in very recent cases, it exasperates instead of calming. The patient requires freedom of action; is relieved by strong muscular exercise; and this should be provided for by such a subdivision of airing courts as would leave one for the occasional use of a single patient, at least for a few hours in the day. After being indulged in active voluntary exercise for an hour, two hours, or such period as may seem desirable, the patient should be secluded. Calmness and sleep will sometimes follow; or sufficient tranquility to enable the attendants and officers to talk to the patients with effect.

Under the system of restraints, when a patient became noisy and violent, and particularly when some mischief had been committed by him, it was considered necessary, and it was the usual practice, to overpower him, and to put him in some kind of strait waistcoat. This was done with great difficulty, and with much danger to the attendants. Observation has convinced the resident physician that this was a useless, and even hurtful, mode of management. It was like endeavouring to smother a fierce fire by heaping very combustible materials upon it. A maniac in the midst of his paroxysm, like a man in a violent fit of passion, should be interfered with as little as possible. The violence, which if met by violence, will become still more aggravated, will often,

if felt to itself, subside even in the course of five or ten minutes. Whatever the duration of the violent accession, its continuance is a bar to anything but such management as protects the patient and those about him. It is in intervals of calmness that the foundations of moral treatment must be laid, and the confidence of the patient gained. To acquire this confidence is the key-stone of all moral treatment; and nothing will so much oppose its acquisition as brutal or even impatient usage during the paroxysm.

In the meantime, supposing the violent state to continue, the other patients should be removed from the neighbourhood of the one who is excited; all obvious means of mischief should be guarded against; and the attendants, although not directly interfering, should be watchful and ready. A soothing word now and then, or something new to attract the attention, may be admissible; but all with discretion. Supposing, as must often happen, that the violent fit does not immediately subside, and that the patient continues to vociferate, to swear, to abuse and threaten those about him, and to endeavour to strike them, something more must be done. But in this condition the worst thing that can be done is to struggle violently with him, to overpower him, and to mortify him by putting on bodily restraint. The only reasonable object of any treatment is to tranquillize the violent man: and of all modes of effecting this, surely violence is the most unreasonable. Seclusion effects the object more certainly than restraint, and without any violence at all. A lunatic is seldom, even in his most raving fits, insensible to what is said to him: he will often show, among his wildest and most extravagant expressions, that he is watchful of the conduct of those about him; and when the ordinary observer would expect nothing from him but what indicated savage fury, those who are patient with him, and who, regardless of his wildness, continue to indicate their kind feelings towards him, will find that sometimes his voice falters, and his eyes fill with tears. These symptoms of emotion are very transient; but they show that the sensibilities are not quite suppressed; and they warn the practitioner, in language that ought not to be disregarded, to abstain from everything which can further wound or oppress the feelings of an almost ruined mind. These circumstances are now mentioned as bearing upon the manner in which the

seclusion of a violent patient should be effected. Three or four attendants, posssessed of courage and good temper, should surround him; and telling him that he would be much better if quiet, and in his own room, should endeavour, by gentle occasional efforts, to induce him to walk into it. It will sometimes be found, that although he protests loudly against the measure, his steps gradually proceed in the direction required. At the same time, steadiness and strength may be required to prevent his retrograding; but well-qualified attendants will not on this account resort to violence. If he strikes or kicks them, they must of course effect their purpose as speedily as possible, and with steadiness, and even with force; but always without passion. As soon as the patient is thus placed in his room, he is not unfrequently found to become quiet; or if he continues to talk loudly, it is not for a long period. In all probability he will soon lie down on his bed and go to sleep. If he continues violent, he is at all events out of harm's way. He will very seldom attempt to hurt himself; and he can hurt no one else. The window of his room should in all cases be secured by an efficient shutter and lock. The bedstead, which should be of wood, should be fastened to the floor, and remote from the window. Sufficient light should be admitted through holes made in the window-shutter to enable the attendants, by looking through the inspection plate in the door, frequently to ascertain the state of the patient.

The abuse to which this seclusion is liable is that of being too prolonged. A troublesome patient being once locked up, it is natural that the attendants should have no very anxious desire to let him out: but if the superintendant is assisted by officers of proper activity, this abuse should be impossible. The seclusion should in all cases be immediately reported; and after two or three hours, some officer of the asylum should visit the patient, or at least look at him through the inspection-plate, so as to judge of the propriety of the seclusion being continued or put an end to. This should be done with great circumspection. If even the cover of the inspection-plate is moved roughly and noisily, the patient is roused and irritated. Still greater mischief may be done by prematurely going into his room. A daily report should be made to the superintendant of the patients who have been in seclusion,

and the number of hours they have been secluded. It is impossible to lay down rules for the general length of seclusion; three hours, two hours, or one hour, in many cases answer every purpose. In other instances, after four or five hours, although the patient should be brought out, and a trial given of his capacity to behave well, it is not found practicable to have him at large among the other patients; and it is better to keep him in his room till the next day. Many patients liable to periodical excitement, and especially females, are far more comfortable if kept in seclusion during the whole period of their excitement.—*British and Foreign Medical Review, April* 1841, *p.* 546.

36.—*Neuralgia Treated with Acupuncturation.* By Professor Riberi, Turin.—[Several cases of this troublesome disease are related, in which acupuncturation was beneficial. We give the following case as an example, and refer the reader to the other cases related in the Medico-Chirurgical Review, viz., sacro-lumbar neuralgia, severe brachial-neuralgia, lumbo, sciatica, neuralgia, and painful paralysis of the limbs.]

Neuralgia of the Foot.—A young woman, when 22 years of age, became affected with a most excruciating pain in the right foot, which was occasionally swollen, and apparently highly congested. She was repeatedly bled and the foot was frequently leeched: but without effect. For ten months she was obliged to keep her bed. When admitted into the clinical wards of the Turin Hospital under the care of Professor Riberi, the seat of the pains and swelling was on the outer side of the foot; from this point the pains extended up along the leg, and the swelling affected the entire *dorsum* of the foot. Whenever the foot was lowered even a few lines below the horizontal level, the sufferings were much increased, and the same result followed the mere pinching of the skin. The "point de depart" of the pain was manifestly in the nerves of the foot. Antiphlogistic remedies were tried at first; but although the constitutional health, which had begun to suffer, was considerably improved under their use, there was no relief of the local neuropathy. M. Riberi then tried acupuncturation: ten needles were inserted into the flesh, and allowed to remain in for the space of an hour. The operation was repeated four or five days afterwards, and subsequently at

seven different times. The second time, the needles were left in for two hours: then for three, four, and even five hours. From the date of the first operation, the pains were so much relieved that the patient could rest on the affected foot, and in the course of a month she was able to leave her bed and walk about, her sufferings having entirely ceased.—*Medico-Chirurgical Review, April* 1841, *p.* 501.

37.—*Treatment of Delirium Tremens.* By Dr. Ware, Boston, North America.—All these cases were free from combination with acute disease, with one exception; in this there was inflammation of the arachnoid membrane of the brain, as determined by dissection. This was fatal. Four patients were bled, and all of them recovered. Of the whole number, twenty-nine, one died.

The results of the different methods of treatment will be more readily compared, if they are thrown together into a tabular form.

Treatment.	Number of Cases.	Bled	Died	Recovered.	Complicated with acute Disease.
Opium, large doses	8		4	4	1
„ small	7	1	2	5	1
Emetics	12	1	1	11	2
Bleedings	2	2		2	
Eclectic	9	5	3	6	7
Quinine	1			1	1
Mercurials	1			1	
Expectant	29	4	1	28	1
	69	13	11	58	13

It appears, that of fifteen cases in which opium constituted the principal remedy, six died; whilst of fifty-four in which opium was not used at all, or only incidentally in small quantities, only five died. Still further, if we separate from these fifty-four, the nine cases in which the treatment was eclectic, and in which the mortality seems to have arisen from the combination of acute disease, we have a remainder of forty-five cases, of which only two were fatal.—Again, if we compare the mortality of those cases in which opium was pushed to the full extent advised by writers on this disease, with

those in which no active remedy was employed, we have a mortality of one in two, against a mortality of one in twenty-nine.

This difference in the results of treatment would seem altogether too great to be attributed to accident, and goes far to establish the truth of the opinion formerly expressed, that opium given in large doses is actually injurious to patients labouring under delirium tremens. But even admitting it to be possible, that the great proportion of fatal cases occurring where opium was used, was accidental, it certainly, I think, will not be contended, that the favourable termination of the cases not treated by opium, was also owing to accident. And it will certainly follow, that opium, if not actually injurious to these patients, is at least useless, and that our success in this disease will be sufficiently satisfactory without it.

The examination which has been made of these cases, led me to the notice of some other circumstances relating to the history of delirium tremens, which it may be worth while to record.

And first, it appears that a case of this disease is not often fatal, unless some other affection is present, which is in itself dangerous, and liable, even without its complication with delirium tremens, to prove fatal. Of the eleven fatal cases above recorded, seven or eight were of this character. It is not, however, always in our power, to be certain of the existence of such a combination, since the effect of the delirium is to absorb or overshadow whatever other affection may coexist, and thus to obscure its symptoms and prevent us from recognizing its presence. It may have been possible, therefore, that in the other fatal cases where no such combination was apparent, it may have existed. But it is still worthy of remark, that of the fatal cases occurring among patients who were presumed to be free from any such combination, two, if not three, were of those subjected to the full opium practice. —*Dublin Journal of Medical Science, Jan.* 1841, *p.* 505.

38.—*The Use of the Gum-Elastic Tube in Extreme Abdominal Distension.* By Dr. Daniel Donovan, Skibbereen.—[By referring to Article 40 of our first number, the reader will find a very interesting account of Dr. J. O'Beirne's employment of the rectal tube in strangulated hernia, by Mr. Maunder. Dr. Donovan relates the following interesting case which beautifully confirms the account there given. He says—]

I was sent for on the 4th of October, 1840, to see the Rev.

Mr. G——. About three days before, after being exposed to the combined influence of cold, great bodily exertion, and febrile miasm—he was attacked with severe rigors, and continued since then unwell. His symptoms, when I first saw him, were intense pains in the head—flushed countenance, and increased heat of skin—his pulse, at the wrist, was not remarkable as to strength or frequency; but the temporal arteries throbbed violently—his tongue was white, but not much furred—the bowels were confined—urine scanty—had neither nausea nor vomiting.

15th.—Profound stupor—stertcrous breathing—surface bedewed with warm sour-smelling perspiration.

18th.—Abdomen enormously distended—respiration fifty in the minute—pulse at the wrist entirely gone—right upper and lower extremities rigid and inflexible—left extremities violently convulsed—constant muttering delirium.

From the severity of the symptoms, we considered the case hopeless, and under this view left the house; but subsequently returned, and in consultation agreed upon using the gum-elastic tube. In conjunction with Dr. Dore, and Mr. Crowley, the apothecary to the dispensary, I passed the instrument up the intestine to the extent of eight inches; an immense quantity of gas, so fœtid as to drive the nurse tender and another assistant from the room escaped, and the abdomen at once resumed its original size. Without removing the tube, Read's syringe was applied to it, and about eighteen ounces of a terbinthinate injection thrown up, which was immediately discharged, together with a large quantity of pale-coloured, feculent fluid. The pulse became at once perceptible, and immediately after he fell into a sleep which lasted for two hours, and awoke considerably better. As the convulsions and jacitations still continued, we directed that he should get every three hours a table spoonful of the following mixture:—

℞. Camphoræ, ʒ ii.; spir. vini rect. ʒ ss.; pulv. acaciæ, ʒ ii.; emulsionis amygdalar. ℥ viss.; syrupi, ℥ jss.; tinct. opii. acet. ʒ ii.—M.

After the second dose he again fell asleep, and continued so for twelve hours, and, at our next visit, we were surprised and delighted to find our patient free from delirium, tremors, and convulsions. His convalescence went on progressively, and he is now quite well.—*Dublin Med. Press, Dec.* 2, 1840.*p.* 356.

SURGERY.

39.—PRACTICAL REMARKS ON CAUSTICS.

By Sir Benjamin Brodie, F.R.S., &c.

Some caustics act very slowly upon the part to which they are applied, while others cause the part to slough rapidly; some are productive of great pain, which last for a longer or shorter time; others again destroy the parts to a great extent; the effects produced by others are local. In some cases, granulations rise above the surface and prevent new skin forming over them; it is important that they should be destroyed, for this purpose you should use nitrate of silver; this causes the destruction of some, and the absorption of others. There are some cases where there exists a great number of fungous growths, and it is necessary to get rid of these. You will find this ointment useful—Ærugo æris, cupri. sulph. hydrargyri nitrico-oxidi, a.a. ʒ ij.; hydrarg. perchloridi ʒ j. adeps q. s. ut fiat unguentum. This may be spread upon lint and applied to loose fungous growths. One mode of making issues is by applying caustics; you should use for this purpose caustic potass until it has just penetrated through the skin. If you rub on this caustic often, you get considerable bleeding; caustic potass, too, frequently continues to spread after its application. The concentrated nitric acid does not spread so much as caustic potass. I have seen nitrate of silver pounded and rubbed up with lard, applied to make an issue, its action, however, is slow, and causes much pain. Other caustics produce much less pain, and accomplish the object more rapidly than this. When an issue, or wound, or sinus is open, and you wish to keep it so, lest the orifice heal, and matter should form and produce abscess, you should touch the margin with caustic potash, which causes a slough, and this is a long time coming away. I have seen lunar caustic applied in these cases gently, give pain, and cause even cicatrization of the orifice. You will frequently have to apply caustic, when it is material to use it well, as in the case of a bite from a mad dog; whether he be mad or only

supposed to be so, the treatment is the same; it is better to excise the part where this can be easily accomplished, but in the bite of the palm of the hand it would be a serious thing to cut out tendons, vessels, nerves, &c.; or it may be, that when you think you have cut out all, you cannot follow the wound, you will find it necessary to caustic it. The best caustic on these occasions is the caustic potass, because it dissolves and penetrates through to where the saliva may have penetrated. The best mode of applying it is to melt the potass in a silver or platinum cup, and dip into it a blunt probe, you thus get a layer of potash upon the end; by carrying the probe thus armed into the wound as far as the dog's tooth has penetrated, you may be sure of the caustic penetrating farther. You may use caustics to destroy diseased lymphatic glands. A man has an inflamed gland, which suppurates, and the wound will not heal, because at the bottom of it there is a diseased gland; no ulcer will heal without a healthy basis. You may destroy these by nitric acid or lunar caustic, but the potass destroys them entirely. This was used by Mr. Pearson—an ounce of crumb of bread, perchloride of mercury ʒ j., red lead ʒ j.; this mixed and kneaded with the fingers should be rolled into conical troches, and these you may stick into the gland; they soon act, and continue acting until the whole gland is destroyed. If the application of the first troches be not sufficient, more may be inserted afterwards. I do not know whether the red lead does much good in this prescription, but I have employed this remedy as I found it. Warts on the penis or pudenda may be easily destroyed; sometimes where a great mass exists on the penis or pudenda, the lunar caustic is too weak, you should then use nitric acid until the whole is destroyed. The following will answer well —a drachm of nitric acid to two drachms of the muriated tincture of iron. A useful escharotic for warts on the penis or pudenda is powdered savine and ærugo æris sprinkled upon them, which causes sloughing. Another is this—nitric acid ʒ ss., white oxide of arsenic ʒ j., which has the double action of arsenic and nitric acid.

On these occasions of employing caustics, without care, we are in danger of destroying the skin in the neighbourhood; this may be prevented by having at hand some agent which will neutralize the operation. I may observe once for all,

that it is necessary to use this precaution. If you are employing caustic potass, have by you vinegar; if chloride of zinc, bicarbonate of potash, and so with the other caustics. Caustics may be used with advantage in congenital tumours, nævi, &c. Little vascular spots on children's faces are an object of anxiety frequently in the upper classes; if you look at these you will see one large vessel and several branches supplying them. You may destroy these in the following manner: take a glass pen (pointed glass made into the shape of a pen), which will hold nitric acid, and apply it to the principle vessel; or, in this way, look for the principle vessel, puncture it, and insert into the puncture a fine point of potassa fusa, a moment's touch will be sufficient to destroy the vessel; if the potassa extend farther than you intended, apply vinegar, and you may thus obliterate the vessel without leaving a scar. There are some congenital nævi abounding in the skin formed by a very intricate mesh of vessels; the skin is elevated and of a mulberry colour. If these are of large size, they must be destroyed by ligature or the knife; if of smaller size, you may use caustics not unprofitably. The nitric acid is the best application, this makes a slough, the blood coagulates, and the parts become indurated. This is only applied when nævi are of small size. In subcutaneous nævi, which are not of the same colour, but purple, caustics may be applied to effect their destruction, whether of a large or small size; the great object is to destroy them with caustic rather than ligature. These nævi have been cured by the application of vaccine matter, which acts by producing a slough, but I cannot depend upon it, not having tried the matter myself. You may cure these subcutaneous nævi on the same principle; by this method puncture them with a finely-pointed lancet, then having a probe armed with nitrate of silver, by dipping it into fused nitrate of silver, introduce it into the puncture, the caustic presently causes sloughing, and the vessels are obliterated. If the tumour be of a large size the application must be repeated. I have used this plan with great advantage, when it was necessary to save the skin. I was called to see a child with nævus of the nose: to have cut it out would have disfigured her for life, so I used a narrow instrument for dividing the skin, and inserted the caustic-armed probe into the wound; the operation, after having been performed a few times, suc-

ceeded perfectly, and a scarcely observable mark only was felt. I have destroyed extensive nævi in this way, without leaving a scar. The nitrate of silver is the best caustic for such tumours, and when you apply it, use olive oil to prevent it excoriating the skin.—*Medical Times, Dec.* 19, 1840, *p.* 139.

[The above is an interesting account of some of our best caustics as used by one of our most celebrated surgeons. We cannot help also giving his remarks published in another journal on some affection in which they will be found most useful. It will be seen that some of the following remarks have been already given; but the remainder are so truly practical and useful that we cannot help placing them before the reader.]

There is no class of cases in which you will have such frequent occasion to apply caustic, as those of exuberant granulations, such as are commonly called *proud flesh.* In some cases, in which there is little disposition to form new skin, the granulations rising above the level of the skin in the neighbourhood, it is important that they should be destroyed. On these occasions we commonly use the nitrate of silver, and it is quite a sufficient caustic for this purpose. You rub the part with it pretty freely, and the next day the exuberant granulations have disappeared, partly by sloughing, and partly by absorption. There are, however, occasions on which you will find a great irregular mass of unhealthy granulations beyond what the nitrate of silver will easily destroy. Such granulations as those to which I now allude are frequently generated over an old carious surface of bone, and you will then find that the ointment which I am now going to mention makes an excellent caustic application for them. It is a very old prescription, but not the worse on that account. The ointment consists of verdigris, sulphate of copper, nitric oxide of mercury, of each two drachms, oxymuriate of mercury one drachm, with as much hog's lard as is necessary to blend them together. This may be spread on lint, and one or two applications will be sufficient to destroy a very large mass of fungous granulations.

Caustics may often be used very advantageously for the purpose of destroying diseased lymphatic glands. A man has chronic inflammation and enlargement of the glands in the groin, forming a considerable tumour. The skin over

them ulcerates, forming at last a large ill-conditioned ulcer, which will not heal. What is the reason of this? Because no ulcer will heal unless it has a healthy basis, and here the basis is a mass of diseased glands. These diseased glands may take a long time to recover themselves—not merely months, but one or two years, and as there are plenty of glands to spare, there is no harm in destroying them. You may effect this by the caustic potass, but not very well; you want some kind of caustic which will lie in the substance of the diseased glands and destroy their inner structure as well as their outer surface. The form of caustic I am going to mention was used by the late Mr. Pearson, from whom I had the prescription. It consists of one ounce of crumb of bread, two drachms of oxymuriate of mercury, one drachm of red oxide of lead. These are to be mixed together, kneaded with the fingers, and formed into a sort of paste. The paste should be rolled into little conical troches, and these, if left to dry, become hard like broad seals. These troches may be stuck into the enlarged gland like pins into a pincushion. They produce no effect at first, but in the course of a little time they begin to act, and the patient knows this by the pain produced. This lasts for some hours, and, if a sufficient number of the troches be employed, the whole of the gland is at once destroyed. If any portion remains not destroyed, it is easy to effect it by repeating the process. I do not know whether the red-lead answers any useful purpose; I suppose not, but I found it in the original prescription, and on all occasions, where I find a particular prescription to do just what is wanted, I am unwilling to alter it.—*Med. Gazette, Jan.* 15, 1841, *p.* 602.

40.—*New Kind of Catheter.* By J. C. Foulkes, Esq., Liverpool.—[Mr. Foulkes has brought into notice a new kind of catheter, to obviate the necessity of using different sized instruments in cases of spasmodic or permanent stricture of the urethra: or rather to prevent the necessity of withdrawing the one first used when too large, and substituting smaller ones. The instruments are all made of flexible gum. The outer or largest catheter or case contains a smaller one; both these are tipped with silver—within these there is a still smaller one, rounded as a common catheter with an aperture

at the side for the escape of urine; they all slide one within the other. The smaller one can be advanced through the contracted part, if the larger one is prevented passing. It is something the same as if we passed a catheter down to the stricture, and when not able to pass it further we advanced the stilette of the catheter through an opening at the end of the catheter and through the stricture. The whole when put together forms a sufficiently round point to protect the urethra from injury. For a drawing of this instrument, the reader must refer to Mr. Foulkes' paper in the Med. Gaz.]—*Medical Gazette, Jan.* 22, 1841, *p.* 651.

[Dr. Buchanan, of Glasgow, seems to have been the real inventor of this instrument in the year 1822, since which time it has been commonly used in Glasgow. Dr. Buchanan gives a very interesting account of it in a paper in the Medical Gazette, and also confirms Mr. Foulkes' views as to its utility. Dr. B. ends his paper by stating the following advantages possessed by the instrument.]

1st. The instrument acts on the principle of a wedge, the dilatation by the larger canulæ exterior to the stricture assisting the action which the smaller canulæ and probe exert upon the stricture itself. 2d. We can employ forcible dilatation by means of the probe or smaller canulæ, or elastic instruments substituted for them, with much more safety than with any single instrument, because we are more certain that the force which we employ is directed in the line of axis of the urethra. 3d. In cases of false passage, the compound instrument is much less liable than a single one to enter the false passage, because the smaller pieces cannot so readily take a lateral direction from the line of axis.—*Ibid, March* 12, 1841, *p.* 917.

41.—DIEFFENBACH'S NEW OPERATION FOR THE CURE OF STAMMERING.

By Dr. A. Franz.

[Dieffenbach has written a memoir on this subject which he sent to the institute of France at the beginning of the present year.]

Professor Dieffenbach says, in the above mentioned memoir, that "the infirmity of stuttering had long engaged his attention, but its probable cure suddenly occurred to him while a

patient who had come to him to be operated on for strabismus addressed him with stammering accents. He was led to the idea of removing this impediment by an operation, from observing that the nervous twitchings of the eyelids, and spasms of the muscles of the face, which frequently accompany squinting, immediately disappear after the division of the muscles of the eye. He had frequently seen that by dividing the frænum linguæ, in cases where it was too much tied down, as also by other operations on the tongue or on the soft parts situated at the back of the mouth, some improvement was obtained in those cases where there was a slight hesitation in speech, but never in actual stuttering. He therefore reasoned that in this infirmity the disturbance in the mechanism of speech must originate from a dynamic cause; viz., from a spasmodic state commencing in the trachea, but more especially in the rima glottidis, from whence it extends to the tongue and the muscles of the face and neck; consequently he came to the conclusion that an interruption of innervation in one of the parts affected might be followed by an alteration of the nervous influence, and therefore by a suspension of the disturbance in the mechanism of speech. He thought that this alteration would be most certainly obtained in the nervous action of the vocal organs, by dividing the root of the tongue right across, and through its whole thickness; for doing which he has proposed three different methods:—

1st. The horizontal transverse section of the root of the tongue;

2nd. The subcutaneous transverse section of the root of the tongue, with preservation of the mucous membrane;

3rd. The horizontal transverse section of the root of the tongue, with excision of a portion in the form of a wedge.

The Professor has operated in two cases according to the two first and more easy methods, but finding that although the patient was able to pronounce a few words without stammering immediately after the operation, yet on its recovery the impediment was not entirely removed, he does not speak in such high terms of these as of the third method. According to the latter he has performed fourteen operations: the earlier cases, he states, are perfectly cured, not only of the stammering, but also of the spasmodic contractions of the

muscles of the face, neck, and thorax, and the latter cases promise an equally favourable result. He therefore pronounces this method of performing the operation, notwithstanding its severity, as far superior to the two former, "since by cutting out a transverse portion of the tongue the alteration of the nervous action on the vocal organs must be more decided; the tongue likewise becomes shortened, and its tip turned upwards, which latter circumstance has always been considered as contributing materially to the removal of stammering.

The Professor further hints, that "in selecting a case for this operation, the greatest circumspection is required; that in the execution of it, great dexterity and quickness are necessary, on account of the situation of the tongue, and the enormous hemorrhage which of course takes place; and that in the after-treatment peculiar care is to be observed. If a strict attention is not paid to these circumstances, this operation, which inflicts so great a lesion on an important organ, may either be followed by destruction of the tongue, or even by loss of life." The first operation for the cure of stuttering was performed by the Professor on the 7th of January, 1841, on a young gentleman 13 years of age, and was followed by a perfect cure. In this case, he excised a piece, of the shape of a wedge, from the root of the tongue, being three-quarters of an inch at its superior part, and extending through its entire thickness. I shall not enter here into the details of the operation, as they will be seen from the following case, operated on by myself, according to Dieffenbach's third method.

The patient was seated in a high chair opposite the window; his head being held in a perpendicular position by one assistant, who, at the same time, drew the angle of the mouth backwards by means of retractors. His tongue being thrust forwards was seized by a pair of strong forceps, (furnished with teeth to prevent them from slipping), which I gave to another assistant to hold; by these means the tongue was steadied and compressed transversely. Having seized the tongue, posteriorly to the forceps, with the thumb and fore-finger of my left hand, I compressed it transversely, and at the same time elevated it; then passing a long, curved, pointed bistoury, from the left side beneath the tongue, and at the posterior half, until I felt the point at the right side with my

fore-finger, I cut directly upwards, dividing the tongue right through. I now grasped the tongue in front of the wound with a pair of long forceps, armed at the point with teeth, pressed it firmly together, and with a small straight scalpel made a section from above downwards, commencing on the dorsum linguæ about half an inch anteriorly to the division already made, and meeting it inferiorly; by these two sections a piece of the shape of a wedge was cut out of the tongue at its posterior half. The wound was now united by six ligatures of thick silk, which were passed in such a manner as to encircle in depth and breadth a considerable portion beyond the margin of the wound, and were forcibly drawn together in order to restrain the hemorrhage; this was so far successful that only a slight oozing continued for a short time.

That the loss of blood during the operation was very considerable is not to be wondered at, when we consider the size and number of the blood-vessels divided. The patient bore this severe operation well, but became rather faint towards the termination, and afterwards vomited large quantities of blood which he had swallowed. As soon as he had washed his mouth with a little water, I was exceedingly pleased to hear him pronounce words which, previously to the operation he was utterly unable to articulate; such as time, powder, &c., without the slightest hesitation or stammering, and without any twitchings of the lips, or even convulsive movements of the muscles of the face or neck, and immediately afterwards I was surprised by his saying with facility and distinctness, "there is some blood running down my shirt." He was now put to bed, and desired to be kept quiet, and directed not to be allowed to speak, and to have his mouth kept cool by means of cold water. On my calling in two or three hours I found the case proceeding favourably, no reaction had as yet taken place.

Perhaps it may be as well to state that the muscles divided in this operation are the ligualis, the genio-hyoglossi, the hyoglossi, and the stylo-glossi.

I think, previously to undertaking this operation, we ought to consider well whether the nervous system of the patient is sufficiently strong to stand so severe a shock—whether he will, from age or constitution, be able to bear so considerable a hemorrhage as that which is here inevitable; and it would

be advisable likewise to ascertain that the heart and large blood-vessels are in a healthy state.—*Medical Gazette, March* 12, 1841, *p.* 921.

[Mr. Bennett Lucas has just performed this operation, dangerous as it is, at the Metropolitan Free Hospital. The case is related in the Provincial Medical and Surgical Journal, for May 8th, p. 109, and although not cured was considerably benefited. We cannot however avoid raising our feeble voice against such a proceeding; and if the other operation of Mr. Lucas's which we here relate be of any service, it should be adopted instead. The first intimation which Mr. Lucas had of the cure of stutter was from a newspaper in which Dieffenbach's operation was alluded to. Mr. Lucas, however, differs from that eminent surgeon both in his theory and general treatment of stammering. "His operation has for its object the division and partly removal of those muscles which oppose the free elevation of the tip of the tongue to the superior alveolar arches." He relates several cases in the Provincial Medical and Surgical Journal, and amongst the rest the following:]

Mr. Mosely, aged 22, has stammered since he can recollect. This case is an excellent one to try the operation; his palate is narrow and very deep; when his mouth is open he cannot elevate his tongue more than half way to the superior alveoli; his frænum linguæ is very tense when he attempts this movement. The only words he stammers at are those that require the tip of the tongue to be applied to the upper alveoli. His engagements make him anxious to pronounce distinctly the price of articles of merchandise; and he tests the intensity of his infirmity by the expressions, *nine and nine-pence, nine and ten-pence, ten and ten-pence, &c.*

Thinking that the frænum linguæ might have been the impediment to his utterance, I divided it freely, but with no good effect; I next divided and excised portions of the genio-glossi muscles, and his ability to pronounce correctly his wished-for expressions became at once apparent to those present, as well as to the patient himself.

The operation which I perform is as follows:—The patient being seated before a strong light, and his head resting against the breast of an assistant, I make him open his mouth fully, and elevate his tongue, which movement puts the frænum

linguæ upon the stretch. In most instances the patient can keep his tongue for a sufficient time in this position to enable the operator to accomplish the object intended; but if he should not be able to do so,—if the tongue be unsteady, as it sometimes is,—the assistant who supports the head can readily keep the organ elevated and steady with his fingers, having first covered them with a napkin. I next seize the frænum with a common dissecting forceps, held in my left hand, and with a pair of sharp-pointed scissors I divide this membrane across, and also the mucous membrane laterally and vertically. After this is accomplished, the borders of the genio-hyoglossi muscles, often without any more dissecting, are brought into view; but in other instances it has occurred that a fascia and cellular tissue intervened between them and the frænum, so as to render this part of the operation more difficult, not only on account of the other parts which require to be divided, but also on account of the depth of the muscles from the surface. At this part of the operation there is often hemorrhage from some of the sub-lingual veins being divided, but never more than to the amount of a small spoonful, and the flow of saliva also from the Whartonian ducts is considerable. At other times there have not been more than a few drops of blood. If the hemorrhage should obscure the further steps of the operation, the patient should wash his mouth with cold water two or three times, when it soon ceases. When the free borders of the muscles are brought into view, I seize them with the same forceps that was used for grasping the frænum, and I cut a triangular portion out of each with the sharp-pointed scissors. The reason I prefer the latter to be sharp-pointed is, that I am enabled to see better what I am about. The quantity of muscle I remove depends upon circumstances. After having removed the quantity apparently necessary for the free and perfect elevation of the tongue, I place the point of my fore-finger in the wound, and if any parts become tense when the tongue is being raised, I free the organ from their influence. The proximity of the ranine arteries, the large sub-lingual veins, and considerable branches of the sub-lingual and gustatory nerves, makes it necessary to observe caution in the excision of the muscles. The only evidence of injury done to any of these parts in the operations I

have performed was a tingling pain shooting from the seat of operation to the base of one, and sometimes to those of both. This sensation, however, subsided in a few minutes. In a few days the wound is completely healed, and in general no trace of the frænum linguæ is left.—*Provincial Medical and Surgical Journal, April* 3, 1841, *p.* 13.

[Mr. Lucas disapproves entirely of the removal of the uvula or tonsils as practised by Mr. Yearsley, as he does not consider the affection to arise from any morbid states of those parts or their connections. He thinks also that far too much weight is attached to the opinion of Dr. Arnott and others, who consider the affection to be often "owing to a spasmodic affection of the glottis by which an arrest of the passage of air necessary to pronunciation takes place." Amussat, Phillips, Velpeau, Baudens, and Bonnet, of Paris, have likewise their respective methods of curing this affection, a short account of which may be seen in the Dublin Medical Press, for April 14, 1841, and from which we give the following summary:—]

Twelve different operations have been already proposed for the cure of stuttering, which may be classed as follows:

1st. Simple transverse division of the muscular structure of the base of the tongue, performed by M. Dieffenbach by two separate methods.

2nd. Transverse division, with excision of a portion of the base of the tongue, performed by the same surgeon.

3rd. Mr. Lucas's method, consisting of excision of a triangular portion of the bodies of the genio-glossi muscles.

4th. A simple incision in the bodies of the genio-glossi muscles, common to MM. Amussat, Phillips, and Velpeau, though performed in a different manner by each.

5th. Division of the attachment of the tendons of the genio-glossi muscles, (and occasionally of the hyo-glossi muscles also), to the lower jaw, performed, in different ways, by MM. Baudens and Bonnet.

6th. Simple division of the mucous and subjacent tissue of the floor of the mouth, occasionally found sufficient by M. Amussat.

7th. Excision of a portion of the apex of the tongue, performed in one case by M. Velpeau.

8th. Mr. Yearsley's method of snipping off a portion of

the uvula, &c.—*Dublin Medical Press, April* 14, 1841, *p.* 234.

[Mr. Yearsley states that he has frequently observed that "a large number of patients suffering from deafness, are affected with enlargement of the tonsils and uvula, and an irritable condition of their investing membrane, and of the pharynx generally." He generally removed the tonsil glands in these cases, and in some patients who were also affected with stammering, he perceived that the same operation cured them of both deafness and stammering. He has since operated on above forty cases of the same kind, with more or less success, (see Medical Gazette, March 12, 1841, p. 920), Mr. Braid, of Manchester, takes a somewhat similar view as Mr. Yearsley. He thinks, however, that stammering, chiefly or generally arises from a want of proper action in the epiglottis, and "the effect resulting therefrom on the vocal cords, &c."] —*Medical Gazette, March* 19, 1841, *p.* 950.

42.—*On the Employment of Threads of Caoutchouc for Sutures.* By Thomas Nunneley, Esq., Surgeon to the Leeds General Eye and Ear Infirmary, and Lecturer on Anatomy and Physiology at the Leeds School of Medicine.—[We think the following observations on this new kind of ligature worthy of the consideration of the profession. There is no doubt that an elastic ligature would better accommodate itself to the varied pressure and adhesion of the parts to which it may be applied. Mr. Nunneley says:]

With every precaution which may be taken, it too often happens that the ligatures are obliged to be prematurely withdrawn, owing either to the irritation they produce, the too great stricture of the parts by their swelling subsequent to the introduction of the ligature, or to stop that ulcerative inflammation which nature sets up, and by which she speedily accomplishes its removal.

More than twelve months since I was induced to try several substances, in the hope of discovering one which should be free from the objections incident to the ordinary ligatures; this, I think, I have succeeded in, or, at least, I have found one which certainly possesses many advantages over the filamentous material now commonly employed; it is that sub-

stance which is now applied to so many purposes in the arts —caoutchouc drawn into fine strings. These threads I have hitherto obtained by removing the fibrous envelope of cotton or silk, with which the Indian-rubber itself is surrounded in the elastic web, at present so commonly employed for bandages: not being able to procure in Leeds the elastic strings alone, but in London, or where the fabric is manufactured, there could be no difficulty in obtaining them.

The advantages which it possesses as a ligature are, the much longer time it remains without producing irritation of any kind; being elastic, it holds the divided parts in contact with much less stretching, in a more natural manner, and at the same time, it keeps up an equal degree of tension; for if the parts swell, the ligature gives way in proportion to the pressure; on the contrary, do they contract, so also does the ligature, and equable approximation is maintained. From being smooth and unirritating, it excites so little disturbance that a greater number of ligatures may be introduced, and thus the parts may be more accurately adjusted to each other; moreover, by not inducing ulceration, the scars left after its withdrawal are less than those produced by silk,—advantages not to be lost sight of in operations about the face and neck.

Though I have not had an opportunity of trying the caoutchouc ligatures in operations for hare-lip, I am disposed to think they might supersede the twisted suture, and thus obviate the introduction of pins, which always leave marks.

In employing the caoutchouc thread, it should be borne in mind that, when put upon the stretch, even to a slight degree, they become much more slender than when perfectly relaxed; consequently this must be allowed for, by selecting a thread which is somewhat thicker than would otherwise be chosen.

In tying the ligature, care must be taken to draw it so tight that the lips of the wounds shall be retained in accurate apposition without making any stress upon the string; the ends should be knotted three or four times, to prevent any danger of their giving way; this will be more effectually prevented if, in making the first knot, the cord be twice twisted, as many are in the habit of doing with the common thread ligature.

I need scarcely add, that the very qualities which render the caoutchouc thread preferable for sutures for wounds,

totally unfit it as ligatures for vessels, where a sharp *unelastic* string is necessary for first dividing the inner coats, and subsequently retaining them in contact.—*Lancet, March* 13, 1841, *p.* 849.

43.—ON STRABISMUS OR SQUINTING.

By Thomas Elliot, Esq., M.R.C.S., Carlisle.

[Although our periodicals have been actually deluged with papers on this affection since its first introduction into this country, we cannot help devoting a few pages to the following remarks of Mr. Elliot, whose opinions, however, have been contradicted by some able writers on the subject; but which, nevertheless, seem to us very worthy of notice. We bring them forward more particularly as they differ from most other writers on the subject. Mr. Elliot says:]

The best definition of strabismus that occurs to me is—that state of the eyes in which parallelism of the axes of the globes, in their different movements, no longer exists.

Strabismus, as thus defined, may be conveniently divided, for practical purposes, into two great classes, viz. 1. Those cases in which there is no association whatever in the motions of the two eyes; or which only can be properly called cases of single squint; and, 2. Those cases in which there is an association in the motions of the eyes, where the position of one eye is always dependent on that of the other, and which may with equal propriety, be called cases of double or mutual squint.

1st Class. Cases of strabismus in which there is no association in the motions of the eyes, or cases of single squint.

The affected eye may be either fixedly inverted or everted. No change of position takes place in it on closing the other eye, or on directing the patient to look to one side or the other, when both eyes are open. In this class there is inversion or eversion of one eye, but no mutual convergence or divergence; and the deformity may be caused either by paralysis of the opposite muscle, or morbid adhesions.

In my own practice I have only met with one example of this class.

In cases of this kind, it is scarcely necessary to say, that the operation, if undertaken, must be confined to the affected eye.

2D. CLASS. Cases of strabismus in which there is an association in the movements of the eyes, where the position of one eye is always dependent on that of the other, and which may, with equal propriety, be called cases of double or mutual squint.

The two varieties of this class may be distinguished into,

1. Mutual Convergent Strabismus; and 2. Mutual Divergent Strabismus.

1st VARIETY.—*Mutual Convergent Strabismus. a. Cases requiring the Division of one Adductor: and b. Cases requiring the Division of both Adductors.*

a. Cases of Mutual Convergent Strabismus requiring the Division of one Adductor.—That these are not cases of single inversion, but in reality of double or mutual convergence, is proved at once by the experiment of closing the straight or sound eye, as it is generally termed, when the position of the eyes instantly become reversed.

The affection, though slight, is undoubtedly participated in by both, and the effect of the operation on one eye, by removing the mutual convergence and restoring the parallelism, is visible on both eyes, since it not only removes the inversion of the eye whose adductor has been divided, but also the temporary inversion of the other or straight eye, which I have always seen in cases of this class, on resorting to the experiment of closing it and raising its lid, before the operation, as above mentioned.

Whether the parallelism of the eyes will be restored by the division of one adductor, may be nearly always ascertained before hand, by attending to the following circumstances:—

1. If the mutual convergence be slight, as seen by a corresponding slight inversion of one eye, when the patient regards an object placed before him, both eyes being open.

2. If the power of abduction be free, which I believe is always the case where the inversion is principally caused by the adductor, and not much shared in by the superior and inferior recti.

3. If the eye-ball be large, as in that case it will be less acted on by the inner fibres of the superior and inferior recti, unless their tendons be large in a corresponding degree, so as to wrap over to the inner side of the ball, which I have not observed to be the case; and,

4. If the patient be young, or the squint of short duration,

which diminish the probability of any great implication of the inner fibres of the superior and inferior recti.

There can be no doubt, that the parallelism of the eyes would be restored in these cases by the division of the adductor of either eye; but a preference must be given to that of the inverted or less clearly seeing eye, for the following reasons:—Suppose the left eye to be usually inverted, or not used on account of its indistinct vision. The section of the right adductor would, by restoring the parallelism of the eyes, remove the inversion of the left eye, and no squint would be perceptible on desiring the patient to look at an object placed before him; but the movements of the eyes, on looking to the right side, would be too free; while, on looking to the left side, on the contrary, the eversion of the left eye and inversion of the right, would be limited in a corresponding degree, from the circumstance of the inner fibres of the superior and inferior recti of the former having been probably in some degree implicated or practised in the production of the almost constant inversion of that eye, so as to counteract more or less the abductor's action; and the same fibres of the other or right eye would probably offer but a feeble opposition to the right abductor, as the actions of the different muscles of that eye may be presumed to be normal, in consequence of its natural movements when both eyes are open, and it is made use of.

In cases, however, of this kind, where the sight of the eyes is equally distinct, and where, consequently, they are made use of alternately, the operation on either eye will answer equally well.

[Five interesting ones are brought forward to illustrate this opinion: in commenting upon which the author says:]

The preceding cases will serve sufficiently well to illustrate this class, which, though single as regards the operation, are in reality cases of mutual convergence, as is proved both by the dependence of one eye on the other as to the position before the operation, and by the effect of the division of one adductor, not only on its own eye, but also on the other which is no longer inverted, when its lid is closed and raised.

The only difference between these cases, and those to be next described, is in the degree of convergence, which, if great, will require the division of the second principal con-

verging muscle, or the abductor of the other eye, whether that convergence be indicated by a continued inversion of the same eye after the division of its adductor, or the inversion be apparent in the second or formerly straight eye.

[The most important cases and those which more particularly elucidate Mr. Elliot's particular views and treatment, are the following:—]

b. Cases of Mutual Convergent Strabismus requiring the division of both adductors.—In this division I conclude, 1st, those cases in which parallelism of the eyes is not perfectly restored by the division of the first adductor; and 2d, those cases of relapse where the convergence cannot be removed by practice, whether it be apparent by a renewal of the inversion of the eye already operated on, or by a change of inversion from the first eye to the other, which inversion, as I have before mentioned, will be found to depend on the relative powers of vision of the eyes.

[Mr. Elliot first gives "a few examples where the inversion was removed from the eye, the adductor of which had been divided, and appeared in the other eye," but it is more particularly to the other variety to which we wish to direct the attention of the reader, namely, the]

Examples of the last variety of cases belonging to this division, viz. those where a still continued convergence, after the division of the adductor of the inverted eye, is indicated by a continued inversion of the same eye.

This continued squint or inversion, which is still confined to the eye whose adductor has been divided, when both eyes are uncovered, and the patient looking before him, has been attributed to very different causes, such as an undue contraction of the inner fibres of the superior or inferior rectus, an unhealthy state of the external rectus or abductor, healing of the wound of the conjunctiva by first intention, the eyeball returning to its bed of membrane and fat, like a cast in a mould, an imperfect division of the adductor and its cellular tissue, &c., &c., and the practice adopted for its removal has varied according to the views entertained by those writers as to the reasons of the continued inclination inwards of the eye.

The remaining inversion is no doubt effected by the contraction of the inner fibres of the superior and inferior rectus; but, as I stated in the Lancet of September 19, this contrac-

tion is made to accommodate the more distinct vision of the other eye, and is not the result of a shortening of those fibres, as is at once proved by the reversed position of the eyes, when the straight or sound one is closed.

An unhealthy state of the abductor, contraction of the conjunctiva, &c. are also disproved by the same simple experiment.

The cause of the evil is the non-removal of the mutual convergence. the continuance of which is to be attributed to the ill-directed association of the motific nerves; and the continued inverson of the eye operated on, depends, as before stated, on its very indistinct vision, which renders it comparatively unfit for use.

Were the infection confined to the inverted eye, and the inclination inwards attributable merely to a temporary effort made by its superior and inferior recti to prevent confusion of vision, the practice of bandaging the sound or straight eye would be all that was required. But, as already mentioned, the only effect of that practice in these cases is reversing the position of the eyes, so that the utmost to be gained by its adoption would be a permanent change of inversion from one eye to the other, by producing a change in their relative powers of vision.

I trust the distinction thus made between inversion and convergence will be clearly understood. The former depends on the eye's comparatively indistinct vision; the latter, on an abnormal association of the nerves of motion. That the fault lies in the nerves which regulate the movements of the muscles, and not in the muscles themselves, is evident, 1st, from the natural position of each eye when the opposite one is closed; and, 2dly, from the circumstance that a similar action is frequently adopted by the remaining muscles or superior and inferior recti, causing a temporary relapse, to remove which a side-practice of longer or shorter time will be often found necessary, till the eyes be accustomed to their new association of parallelism of movements.

It is on account of the difficulty of removing the converging tendency that I now invariably adopt the practice of dividing the second adductor, when an inversion, however slight, is seen in either eye on looking forwards, after the division of the first adductor; not to mention the improvement in the appearance of the eyes by rendering them symmetrical.

[Out of twelve very interesting cases to illustrate this doctrine of dividing both adductors, when the division of the first does not cure the affection, we select the following which is sufficiently illustrative:]

Sept. 14. Miss Rennison, aged 13. Squint of seven years' duration. Inversion of the left eye so great, as nearly to conceal all the white internal to the cornea, when the right eye was straight, and the patient looking at an object straight before her. On closing the right eye, their position was reversed, but on raising its lid, the left eye instantly turned in again. Right eye always made use of, as the vision of the left was very indistinct; abduction good; eyeballs small.

Operation.—The left adductor was separated and divided. On uncovering the right eye, a slight inversion was still apparent in the left. On searching carefully with a blunt hook, it was found that all had been divided. The adductor of the right and straight eye was then divided, which completely removed the remaining inversion of the left one, and restored the parallelism, at the same time rendering them equally prominent.

[Mr. Elliot then says:]

It would be useless to offer more examples of this variety of strabismus,—indeed, I fear they are already too numerous. But I wish to impress on the reader,—1, that the division of the adductor of the inverted eye very often fails in removing its squint; and 2, that its continued inversion may be removed instantly by a division of the corresponding muscle of the straight and clear-seeing eye, provided the convergence be mutual, as ascertained beforehand by their association of movements.

I am anxious to lay the more stress upon this, as I regret to learn that such eminent surgeons as MM. Roux and Velpeau regard the operation itself as unsatisfactory, and one that must soon be abandoned; an opinion entertained also by some surgeons of this country, who have operated on a number of cases, but confined their operation or operations to the inverted eye.

The continued inversion, as before-mentioned, depends on the eye's inutility for the purposes of vision; and the surgeon must direct his attention, not to the removal of that inversion by dividing more muscles of the same eye, but to the removal of the mutual convergence, in causing which the straight or non-squinting eye is equally implicated.

As the convergence, though not the inversion, is always shared by both eyes, so ought the operation to be, provided parallelism be not restored by the division of one adductor.

And in such cases, I would insist upon the division of both adductors at the same sitting, in order to remove the converging tendency as soon as possible, otherwise the habit assumed by the superior and inferior recti may be so powerful as to require operation on them also.

In all the cases where I have divided both adductors at the same sitting, the squint has been removed. In most of them the eyes have been instantly made parallel on looking forwards, and equally so in a few weeks on looking to either side. In a few a slight divergence has been caused, accompanied by diplopia; but this has always disappeared in a few days. In two or three an occasional cast has been observed immediately after the division of both adductors, when an oscillation of the eye that was formerly inverted was seen, caused by the alternate action of the abductor, and superior and inferior recti, which soon disappeared when the eyes became accustomed to their new association.

[The author ends his very clever and interesting paper by the following remarks on mutual divergent strabismus:—]

Class II. 2d. Variety.—*Mutual Divergent Strabismus.*—Like the last, mutual divergent strabismus may be classified under two heads, viz.—

a. Cases requiring the division of one abductor. b. Cases requiring the division of both abductors.

a. Cases of Mutual Divergent Strabismus requiring the division of one abductor.—Like the cases of mutual convergence, the closing of either eye makes the other straight; and on raising the lid of the closed one it will be seen everted.

When the mutual divergence is slight, as indicated either by the constant slight eversion of the same eye when the patient looks forward with both eyes open, or by the alternate slight eversion of the eyes, when their powers of vision correspond or nearly so, the division of one abductor will be all that is required; and for the reasons before given, I would select the usually everted eye, or that one whose vision is most indistinct, for operation.

Where, however, the eversion has resulted from the division of one adductor, and cannot be removed by practice, I would

give a preference to the other or straight eye, in order to render them equally prominent.

If the eyes be made use of alternately, parallelism will be restored by the division of either abductor.

b. Cases of Mutual Divergent Strabismus requiring the division of both abductors.—The particulars of the first case of this kind that I operated upon (on Oct. 6, 1840), were given at sufficient length in the Lancet of Oct. 31. The second case was alluded to in the same paper, and will serve to illustrate this class.

Case, Oct. 10. Mr. Wilson, aged 41.—Squint of thirty years' duration. On looking forwards, the right eye is always straight, and the left so much everted as to expose scarcely a line of the albuginea external to the cornea. The eversion is always seen in the left eye, its vision being so indistinct as to render it useless. On closing the right eye the left becomes straight; and on raising the lid of the former, it is seen everted for an instant, when their position becomes reversed. Power of inversion good.

Operation.—The left abductor was separated and divided, and was found scarcely thicker than a crow-quill. A slight eversion was still apparent in the same eye. On searching with the blunt hook, it was found that all had been divided. After a little explanation, the patient readily submitted to the second operation.

The abductor of the straight or sound eye was then divided, which, by removing the diverging power and restoring the parallelism, removed also the continued eversion of the left eye. The cure was perfect, and the power of abducting each eye existed in the natural degree, immediately after the operation.—*Edinburgh Medical and Surgical Journal, April* 1841, *p.* 370—394.

44.—ON THE EXCISION OF JOINTS.

By Rutherford Alcock, Esq., K.C.T.

[We extract the following remarks from Mr. Alcock's valuable paper in the Medico-Chirurgical Transactions, as given in the Medico-Chirurgical Review:]

Mr. Alcock alludes in the beginning of the paper to excision of the articular ends of bones after injuries. And

his remarks are valuable. He shews that this operation has not been sufficiently practised in the army.

Excision of the head of the Femur.—"Excision of the head of the femur has been practised. M. Paillard, in his '*Relation Chirurgicale du Siege d'Anvers*,' gives an example of resection of the head of the thigh bone for a comminuted fracture of the neck,—six inches of the bone, including the head and neck, were removed with very trifling loss of blood. During the first few days, some chances of success were observed; but the limb quickly afterwards became gangrenous, and the patient died on the ninth day. Mr. White, of Manchester, was the first to propose this operation, about the middle of last century. One case only of its actual performance had been related before M. Suetin's, by an American, and was not considered, I believe, as very certainly authentic. The result of M. Suetin's case is not likely to lead many to perform an operation which, I cannot but think, very little calculated to save a useful limb under the most favourable circumstances. I believe, however, that Mr. White, Surgeon to the Westminster Hospital, has performed a similar operation for carious disease of the head of the femur, and with good result."

Excision of the Head of the Humerus.—In wounds of the shoulder-joint, observes Mr. Alcock, Larrey speaks of ten cases in which he avoided amputation by extracting or removing the head of the humerus; one died of fever, two of scrofula, and one of plague. In some there was anchylosis, in others a species of joint.

In 1794, M. Percy showed, in Paris, nine successful cases, where the head of the humerus had been removed; and Larrey again relates a case where the top of the shoulder was struck by a four pound shot, merely breaking the skin superficially, but fracturing underneath the head of the humerus, the scapular end of the clavicle, the acromion and coracoid processes. He cut down upon the broken fragments, and removed them, including the head of the humerus. The wounds cicatrised, and the arm anchylosed at the shoulder, by the gradual approximation of the shaft. In another similar instance there was an artificial joint formed, and slight movement in every direction, although the arm seemed to have less strength than existed in the former case, when there was anchylosis. Mr. Guthrie also speaks of similar cases of

cannon-shot injuries occurring in the British army; but all were fatal. He relates, however, several cases from musket-shot, where arms were saved by removing the head from the cavity, together with any other fragments of the neck.

These facts prove, as Mr. Alcock remarks, that excision of the head of the humerus will occasionally be successful even in injuries inflicted by cannon-shot, and may be applied with confidence in those resulting from musket-balls.

Excision of the Knee-Joint.—Mr. A. reprobates this. "To conclude at once with the articulations of the lower extremity, in reference to these operative means, I will observe that in injuries of the ankle, excision whether of the astragalus or the end of the tibia, may form a resource; and examples are on record, when both the one and the other have been removed with success. If a shot, however, pass directly through the articulation, splintering articulating surfaces of both tibia and astragalus, I believe amputation to be almost invariably indicated. The excision or removal of the whole or portions of one of the articulating surfaces forming the ankle joint will more frequently be found expedient in the dislocations attended with laceration occurring in civil life, where it is often impossible to return the projecting parts to their proper position, than to gun-shot injuries more extensively shattering the bone, and contusing all the parts in the vicinity."

Excision of the Elbow-Joint.—Our author speaks favourably of this—a successful operation in civil practice.

Excision of the Wrist.—It is often, says Mr. Alcock, difficult to decide upon the course to be adopted in wounds and lacerations of this articulation. Patients occasionally recover from very severe injuries, such as the passage of a musket-ball through the carpal bones, or the laceration of a saw passing into the articulation with the hand. Yet these are cases at best eminently uncertain in their results; and although much may be adventured, but little should be promised or hoped. Excision of the end of the radius, the removal of a dislocated carpal bone, or the head of a metacarpal bone, may occasionally be adopted, and with success, to prevent the loss of a hand. It is impossible, however, to predict, with any certainty, the degree of inflammatory and suppurative action which may ensue; and on this chiefly hangs the issue of the case.

If there be crumbling of one or more of the carpal bones, provided the tendons are not divided across, these fragments may be removed, and an attempt made to save the hand. But if there be comminution involving the greater part of the articulation, instead of its lateral extremities merely, it rarely happens that the tendons are not extensively torn across also; and then amputation would be better performed at once, and no attempt made by excision to remedy the mischief.—*Medico-Chirurgical Review, April* 1841, *p.* 314.

45.—*Treatment of Enlarged Bursæ Mucosæ and Synovial Sheaths of Tendons.* By Prof. Williams, Dublin.—[Professor Williams, of Dublin, has cured several cases of chronic tumours of the bursæ mucosæ and synovial sheaths of tendons "by the subcutaneous division of the sac of the tumour and the subsequent application of pressure."]

A cataract needle was passed into the tumour (an enlarged bursæ over the knee), and the entire thickness of the sac divided by several parallel and longitudinal incisions. A portion of the fluid escaped into the cellular tissue, but the greater part found exit externally on the withdrawal of the needle. The knee was then strapped with adhesive plaster, and the limb kept at rest.

[Dr. Houston confirms Mr. Williams's treatment by a similar case of his own, respecting which he says:]

The operation was performed with the cataract needle, but as the needle would not have extended much more than half the diameter of the tumour, it was necessary to introduce it first at one side, and then at the other. In this way a number of radiating incisions were made through the sac on both sides, so that there were at least half a dozen incisions on both sides, radiating from the point where the needle was introduced. Next day the tumour had nearly disappeared, and there was no subsequent pain or inflammation. About a tea-spoonful of fluid escaped during the operation.—*Dublin Medical Press, April* 21, 1841, *p.* 241.

46.—HINTS ON THE TREATMENT OF PILES.

By Bransby Cooper, Esq., F.R.S., Surgeon to Guy's Hospital, &c.

[After entering into the nature and symptoms of piles, which we have not space here to enter into, Mr. Cooper gives a few very valuable hints on the treatment of this troublesome disease.]

Now, a most effectual means in the treatment of piles, is to direct your patients to get into the habit of passing their motions at nights, just before going to bed. You know the more usual time is after breakfast, but just consider for a moment the effect of this on an irritable rectum. The upright posture prevents the rectum from receding into the pelvis, and it is, therefore, left within the action of the levator ani and the sphincters. These compress the irritated mucous membrane, and being like all muscles which are partly voluntary and partly involuntary, excited to contract through the medium of the nerves of the mucous membrane,—as these nerves are morbidly sensitive, so the contractions of the muscles are immoderately violent. The man passes his motion in the morning; goes about his usual occupations; the rectum is thrust within the action of the irritated muscles; it cannot recede into the pelvis and pass from their scope, and the greatest suffering follows.

[In the advanced stages of internal piles, an operation is required for their cure: but as the parts are frequently irritable and inflamed, thereby disabling the surgeon from reaching them, it becomes necessary to soothe and palliate for a time by leeches, enemata, the recumbent posture, and mild laxatives, such as confection of senna and sulphur.]

Sometimes the patient will find it difficult to force down the rectum; you feel the pile scarcely an inch from the anus, and tell him to strain, but he cannot make it protrude. It is here, as with all muscles which are partly voluntary and partly involuntary, that their action cannot be excited by the will alone, without their natural stimulus also. Thus, with the function of deglutition, if you attempt to swallow, you can do it once or twice, because there is some saliva in your mouth; but if you try again and again, you find it impossible to effect; so the pile which the patient cannot force beyond the anus by any mere voluntary effort, he cannot help protruding when he is passing a motion. If you are not aware of this when he comes to be operated on, you can tell him to force the gut down,—he says he can't; then you say you can't operate to-day,—he replies, that you promised to do so; and you part mutually dissatisfied; but when you know what you may expect, you guard against it by giving a dose of castor oil about an hour before you mean to operate, to

ensure an action of the bowels, and then you find the pile protruded ready for you. The object, then, in these internal piles, covered with mucous membrane, is to surround them with a ligature tightly applied, to cut off the ends of the ligature, and return the pile and rectum into the pelvis. The ligature should be tied very tight, but still you must be cautious; for if the base of the tumour be narrow and the the ligature a small one, you would cut off the pile as certainly as with the knife, and I have known several patients killed by cutting off internal piles with the knife or scissors. The piles hang by peduncles much smaller than the base of the excrescence; now the object is not to tie the neck or peduncle, but to surround the mucous membrane and submucous cellular tissue where it forms a flat surface on the gut, taking care not to include any muscular fibres; for if you do so the muscle is irritated, it contracts, and tenesmus is set up, which tells you what you have done, and then you had better at once remove the ligature and apply another more carefully. If you do not tie the muscle, but only the mucous membrane and submucous cellular tissue, there is little or no pain produced and the cure is almost infallible and unattended by risk. I always tie the ligature once, and then lay open the tumour with the lancet, and turn out the blood or coagula it contains. By this the ligature is a little loosened; so I tighten it, and then make the second knot, cut off the ends and return altogether into the pelvis. The opening the pile is a great advantage; for if the tense tumour be returned, even if you have no difficulty in getting it back, it acts as an extraneous body and causes great irritation, whereas there is nothing of the sort if it be opened; it is easily returned and causes no irritation. You may tie two, three, or even four piles in this manner at one sitting: maintain the recumbent posture, and if there is any uneasiness about the parts, use fomentations. The bowels having been freely opened before the operation, keep them costive for a day or two to obviate the mechanical injury caused by the passage of a motion; and to compensate for this, you may excite the other secretions a little. Induce a little perspiration and a freer flow of urine. With regard to the after treatment, the habit of passing the stools at night is the most effectual means of preventing any return.

With regard to external piles, Sir Everard Home is of opinion that they do not take their origin in congested and dilated veins, as the internal ones do, but they arise from inflammation of the subcutaneous cellular tissue, and its thickening with deposit of adventitious matter. This is true with respect to one species, but there is another kind which has been internal, but has become cuticular from constant protrusion. Sometimes you will have both internal and external piles in the same patient, and sometimes what you may call the interno-external, from their having originated internally. In the external you have more pain in the course of the sciatic nerve, and great tenderness of the perinæum, with very often some prolapsus ani; and while the ligature is the remedy for the internal, so is excision for the external. You must shave them clean off, so as to leave the verge of the anus perfectly smooth, and then all you have to do to complete the cure is to occasionally pass a bougie in the anus, to prevent contraction of the opening, resulting from cicatrization of the wounds. When there are both internal and external piles, you must cure the latter first, otherwise they will act as an irritating cause preventing the cure of the former.

[Mr. Cooper makes the following remarks on prolapsus ani, which so frequently accompanies piles:—]

Under ordinary circumstances, you will cure the prolapsus by palliative means and by curing the piles which have caused it, but if the mucous membrane and the muscles have been so much relaxed as to render a large prolapsus permanent, you must take up two or three folds of the mucous membrane which covers it, and surround each fold with a ligature, then return the prolapsed gut into the pelvis. The patient will be disappointed at first as he is not relieved; it is the case that there will be no great relief till the ligatures come away, but after that the cure is permanent, at least so it has proved in either three or four cases in which I have employed this method.—*Provincial Medical and Surgical Journal, March* 13, 1841, *p.* 385.

47.—*On the Operation for Talipes.* By James Braid, Esq., Manchester.—[Mr. Braid gives several cases of Talipes, arising from a *paralytic state* of certain muscles instead of the more common cause, viz., a too powerful or contracted state. For

the cure of these cases, he excises a small portion of the particular tendons implicated in the disease, and by consequent union of the divided ends, he produces such a degree of contraction in the paralytic limb as to act most favourably. The following cases will more completely illustrate what we mean:—]

Case 1.—Miss ——, æt. six years, has been deprived of the use of the left leg by a paralytic stroke. She had undergone a variety of treatment under the first medical gentleman of this town; but, for the last two years, has been given up as a hopeless case. Her present condition is this: the left leg is perfectly powerless, dangling by the side of her crutch, without reaching the ground, and is much colder than is natural; the foot assuming the appearance of a slight degree of varus, so that it would, if brought to the ground, rest on its outer edge, the toes inclined a little inwards, and the heel slightly elevated. On the 30th of June, 1840, assisted by Mr. Rhind, my son, and one of my apprentices, Mr. Pacey, I made a longitudinal incision along the course of a peronæus tertius, which I elevated, and excised a portion of it, to the extent of three-sixteenths of an inch. I then closed the wound with plaster, and applied splints and bandages, so as to approximate the divided ends, and maintain them in contact.

10th.—In the presence of my talented friend, Dr. J. L. Bardsley, and others, she actually walked across the room and back again without any assistance whatever,—a fact which equally astonished and delighted him and all present. In twenty days she was enabled to walk about in a laced-up boot; and in a week more to throw her crutches aside entirely. She has continued well and strong ever since. Besides the operation nothing else was done in this case, excepting the use of a stimulating liniment, which she had employed before without the least benefit.

Case IV.—Master Gresty, æt. $6\frac{1}{2}$ years, has had talipes valgus since one year old, arising from absolute paralysis of gastrocnemii and other muscles on the back of the leg; so that there is not only total inability of extending the foot, but such relation of all the extensor muscles, as to allow the foot to be pressed upwards until it touches the front of the leg. On the 4th of September, I excised three-eighths of an inch of the tendo-achillis.

3rd day.—All going on well.

5th.—Makes no complaint; wound nearly closed, and very little matter discharged.

7th.—All going on well, aud still great warmth of foot and leg, which has increased since the operation, although there is no pain or inflammation to account for it.

10th.—Wound nearly closed; tendon so firmly united as to resist any attempt at pressing the foot upwards, excepting a little beyond a right angle with the leg; and has now power of flexing and extending the foot freely; showing that the paralytic state of the extensor muscles is completely overcome. At three weeks after the operation this patient fell and injured the leg, so as to cause inflammation and suppuration around the newly-formed cicatrix, which retarded his recovery. After this had subsided, with the use of a stimulating embrocation, this patient regained the use of his extremity, so that he could in three months after the operation walk with ease; flexing and extending the foot freely, and capable of supporting the foot and leg in its proper relative position. Before the operation, any attempt at walking was attended with great awkwardness; the leg being tossed forward, the toes turned very much outwards, and the inner ankle approximating the ground.

I believe this operation is entirely new; and I trust the cases now detailed are sufficient to prove that it is most efficient, and a highly important addition to the resources of our art in an interesting and hitherto incurable class of diseases. It of course requires great care and consideration in the execution of it, to excise a sufficient portion, and no more; but I hesitate not to say that, when properly performed, it will succeed in every case of the sort I have referred to. If too little be excised, it will not excite that activity of contractile power in the muscular fibre necessary for the correct and energetic discharge of its functions; whilst, on the other hand, if this is excited to too great a degree, from too much being excised, the result will be the innervation of the other muscles of the limb operated upon.—*Medical Gazette, April* 23, 1841, *p.* 186.

48.—*Ptosis Cured by Operation.* By T. B. Curling, Esq. —[Mr. Curling communicates the case of a gentleman whose eye-lids "hung loose and motionless over both eyes" from

paralysis. Finding the patient to have still complete power over the occipito-frontalis muscle, it struck him that by uniting the superior palpebra to that muscle the patient might have some power over the lid. He says:]

I noticed that he constantly made the attempt to raise the lids by putting the occipito-frontalis muscle into strong action, and that, in consequence, the eye-brows had become much elevated and unusually arched. It occurred to me that if the superior palpebra could be brought under the influence of this muscle the ptosis would be removed, and that he might thereby regain the power of uncovering the eye. The patient being very willing that something should be done for his relief, I performed the following operation. The integuments between the eye-brow and lid, which were very abundant, were raised with the thumb and forefinger of my left hand, and those of an assistant, to such an extent that it was just possible for the patient to close the lids, when, by a single stroke of the scissors, the skin included between our fingers was removed, leaving an elliptical wound which extended from a little below the eyebrow to about one-third of an inch from the margin of the lid and the whole width of the palpebra. Scarcely any bleeding ensued. The edges of the wound were approximated and retained by two sutures, and the part united by the first intention, and perfectly healed in eight days. No ectropium or deformity resulted. The patient afterwards could completely close the lids, and, as was anticipated, could raise the superior one, and uncover the eye, simply by the action of the occipito-frontalis muscle.—*Medical Gazette, March* 26, 1841, *p.* 16.

[Mr. Hunt of Manchester, makes the following comment on this practice, which he himself had previously noticed in the North of England Medical Journal, for Nov. 1830, p. 164.]

There is one objection to such an operation in paralytic cases, even although the power of raising the lid were restored by such a proceeding. In most of these instances all the branches of the third pair of nerves are paralysed, and in consequence of the connection of one of them with the lenticular ganglion, from which body the ciliary nerves supplying the iris proceed, the circular muscular fibres of the iris generally become paralysed, and a widely dilated pupil is the result. It is a question worthy of consideration, whether

continued exposure of the retina to a greater quantity of light than usual, which must be the consequence of such dilatation of the pupil, may not materially interfere with the integrity of the functions of this delicate nervous structure; and thus lay the foundation for amaurosis.–*Ib., April* 9, 1841, *p.* 112.

49.—ON THE ERADICATION OF INVERTED EYE-LASHES: AND ON PREPARATION OF FINE POINTS OF CAUSTIC FOR OPHTHALMIC AND OTHER PURPOSES.

By Dr. James Hunter, F.R.S.E., Surgeon to the Eye Dispensary, Edinburgh.

The following method of eradicating inverted eyelashes, is only applicable when the edges of the lids retain their natural direction, and it is not at all suited to cases of entropium; for in this disease the inversion of the eyelashes depends on a contracted and morbid state of the lids themselves. It was suggested to me by observing the effect of subacute or chronic inflammation in destroying the functions of the ciliary bulbs, as exemplified in ophthalmia tarsi, which, when neglected often produces complete madarosis or baldness of the eyelids. To excite a proper degree of subacute inflammation in the bulbs of the inverted eyelashes, it is enough to innoculate them with some irritant.

The following is the best manner of proceeding; and though the detail of it may seem prolix, I assure the reader it is only by strictly following it that success can be obtained.

1. *To ascertain the presence and position of the inverted eyelashes.*—When they are white coloured, and of extreme delicacy, not exceeding the $\frac{1}{500}$ of an inch in diameter, as is often the case, it is very difficult to distinguish them; the edge of the pupil or iris may form a good contrasting background, and though they may not be visible at once, the surgeon should look from a variety of positions, and alter the direction of the light till he sees them. A convex lens of two inches focus, and not less than an inch in diameter, should be held by an assistant so as to condense the light on the parts, which is a much better plan than using it as a magnifier. If, in order to make the puncture, the edge of the lid is to be removed from the cornea, it is well first of all to blacken the pale and delicate eyelashes with any dark extract, such as belladonna, to render them visible, when con-

trasted with the white sclerotic coat. 2. *The puncturing of the bulbs.*—This should be done with a lancet, or iris knife, entered close to the base of the inverted hairs, *in the direction of their growth,* to the depth of an eighth of an inch, and moved about a little, so as to widen the bottom of the wound, and cut the bulbs. In doing this it is sometimes advantageous to stretch the part either with a small hook, or over a convex black horn spatula, such as is usually attached to a German wire speculum. 3. *The inoculation.*—This must be deferred till the bleeding has wholly ceased, when the lid being wiped very dry, the drilled end of a darning needle slightly damped, and dipped in powdered tartrate of antimony, or, what answers far better, the tartar emetic point made in the manner to be afterwards described, is to be inserted in the puncture, and held there for a few seconds. 4. *The evulsion of the inserted eyelashes is the last step.*—They should be seized lengthways close to their roots, and drawn with a slight jerk. When common dissecting forceps are used, they should be held *below* their shoulder, and close to their points, which are apt to separate a little when the fingers are placed higher up. The best forceps are those made without teeth; the holding part being merely rough polished, so as not to cut hairs. When the eyelashes are exquisitely fine, and slip through even the best made forceps, I have found it an infallible plan to damp their points with a saturated solution of shell-lac in alcohol, and to grasp the hairs for a second or two before pulling them. A momentary, though sharp pain follows the inoculation, and more or less inflammation; but the latter generally subsides in the course of twenty-four hours, and if the operation has been properly done, it recurs in a day or two, in a subacute form, producing a slight pustulation, which, however, is of very limited extent, causing almost no annoyance, but is sufficient to destroy the functions of the bulbs.

Inverted eyelashes are sometimes restored to their proper direction, by making an eschar with a red-hot iron in the skin, a little to the outside of their roots; and when only a single eyelash is misplaced, Dr. Mackenzie of Glasgow, recommends making a puncture in the skin of the lid a little beyond it, and inserting a speck of pure potass, to produce an ulcer, the cicatrization of which alters the direction of the hair. The objections to these methods of rectification by con-

traction are—the risk of producing too much eversion of the lid, causing a *stillicidium lachrymarum*—the very unmanageable and often too extensive action of the potass, (however cautiously applied), from its rapid deliquescence, and the circumstance that the contraction, when confined to one spot, does not always take place in the proper direction, often causing a slight puckering at the part, which obstructs the flow of tears, or leaving a depression along which they pass and trickle over the cheek. Yet in many cases where there is a complete double row of hairs along the tarsal edge, or where only one hair is turned in, the plan often answers very well. As a loose speck of pure potass is not very easily handled, it will be found a safer plan, in this and all other ophthalmic cases, when it is to be used, to employ a fine point of it prepared in the way to be now mentioned.

[Dr. Hunter then states, that on being called on to stop several leech bites on the scrotum, and finding the sharp point of his caustic to be soon blunted, he tried the following method:]

I wrapt the nitrate in a bit of paper, crushed it with my heel, and placing some of the fragments on a silver half-franc piece, I held it over the flame of a candle, and then dipt the triangular-pointed flat end of a silver probe, previously roughened on a stone, in the melted salt, which adhered, and on cooling formed a fine coating. This being inserted quite into one or two of the bites, they immediately ceased to bleed, to get another point of caustic on the probe was the work of an instant, and, in this way, a most alarming hemorrhage (the patient being almost in articulo) was speedily arrested. Ic an recommend the plan to general practitioners whenthey meet with similar cases, and it will be found an improvement to heat the flat end of the probe before dipping it, and afterwards to hold it in the blue part of the flame for an instant, as in this way a smoother coating is procured. Since the above incident, I have been in the frequent habit of employing the same method to get a fine point of lunar caustic for various ophthalmic purposes, such as touching small sloughy ulcers of the cornea penetrating to the membrane of the aqueous humour, and in many other cases. I have also in this way got a fine coating of the nitrate on a probe, to be passed into the nasal duct in some cases of fistula lachrymalis; and I

conceive it might be found useful in many cases in general surgery, such as sinuses, affections of the nose, ear, &c., where caustic would often be introduced, but for the fear of serious consequences from the breaking of a common stick of it in such situations. The plan just recommended answers equally well for caustic potass, when a fine point or globule of it is required, as for producing eversion of a misplaced eye-lash, or for destroying the remains of cysted tumours in the eyelids, or other purposes. The potass may be applied to the roughened surface of any common metal; but for the nitrate of silver, the probes must be of silver or gold, else the salt is rapidly decomposed and the probe destroyed. A fine point of tartar emetic, sulphate of copper, and similar salts, may be got by chipping their crystals, and then fixing the fragment on the end of the probe with sealing wax; but another plan, and the only one, when a long bristle, as it were, of these substances is required, is to take a wire, or the point of an old lancet, and, heating it, and giving it a very thin coat of sealing wax, to push it whilst hot amongst the powdered salt. In this way a probe, which is to be introduced into a sinus, or into the nasal duct, may be coated with sulphate of copper or any other metallic salt; and this is the method I employ to prepare the flat points of tartrate of antimony for inoculating the bulbs of inverted eye-lashes, using for the purpose a bit of platinum foil shaped like a lancet.—*Edinburgh Monthly Journal of Medical Science, April* 1841, *p.* 259.

50.—*Re-union of Completely Separated Portion of Finger.* By Alexander Graham, Esq.—A joiner of middle age, and apparently healthy constitution, while splitting wood with an axe, cut through the index finger of his left hand, between the first and second phalanges. He lifted the separated part from among the shavings, and immediately walked a few yards to a place where I happened to be. Being asked for the amputated portion, he took it from his waistcoat pocket, and laid it on the table. I fixed it on by two sutures, and adhesive strap, and on the fourth or fifth day a pair of scissors being applied to the point of the finger, he distinctly felt them. Complete union took place, with restoration of the powers of the part which had been separated.—*Ibid, p.* 257.

51.—*Remarks on the Treatment of Hydrocele.* By Bransby Cooper, Esq., F.R.S., &c.—*Iodine Injection.*—For the last two or three years, Mr. Cooper has used this exclusively—two drachms of tincture of iodine and six drachms of water; two drachms of which mixture may be injected and left. I have a note here stating that Dr. Henry Goodeve has used this injection in India in 276 cases, and has only failed twice. Since I have used the iodine, I have not had a single case where the injection failed to effect the radical cure, and only one where I had to repeat the injection. This was a case where the tincture of iodine that I used was bad, and as I felt convinced it would not succeed, I repeated the injection four days afterwards with some which had been properly prepared. The chemists will tell you more of this matter than I can; but If the tincture be made without the admixture of hydriodate of potash a precipitate forms when you add the water, and the mixture is quite useless, but when properly made the watery solution is perfectly bright.

Always place your patient in a chair.—Always place your patient on a sofa, or let him lean back in a chair, because any one is liable to faint, however bold he may appear; and then, if you have operated while he is erect, he falls, probably upsets the basin, hurts himself, or frightens his friends, all which appear very clumsy, especially in a private house.

Never let a patient walk home after injection.—Even after simple tapping, I have several times known inflammation thus set up sufficient to bring about a radical cure; and I know of several cases where the patient has walked after injection, where great sloughing, and in one case death, ensued. I have notes of a case here, where acute inflammation was thus set up, which terminated in gangrene and death in thirty-six hours, though the sac was not injected. William Knowlson, aged 64, was tapped in the surgery by one of the dressers, and about twelve ounces of common serum evacuated. Injection was not practised. He walked about four miles on the same day, and in the night was attacked with acute inflammation of the tunica vaginalis. The next day he was seen by a parish surgeon, who treated him for strangulated hernia, and afterwards sent him into this hospital, when there was great swelling of the scrotum and prepuce, and much irritative fever. Active treatment was adopted, but in less than twelve

hours symptoms of gangrene of two-thirds of the scrotum came on, when stimulating poultices were applied, and he took calomel and opium with wine, porter, quinine, and as much nutriment as possible; but he died within 36 hours from the first attack. Sir Astley Cooper also mentions cases where dangerous symptoms came on after the patient had been allowed to walk; and one among others, of a gentleman who went down to Birmingham in the mail soon after injection, and sloughing of the whole of the scrotum followed. He also gives two cases where he thought suppuration was thus produced.—*Medico-Chirurgical Review, April* 1841, p. 541.

52.—*On Dilatation of the Urethra in Stricture.* By James Arnott, M.D.—A tube of oiled silk, lined with the thin gut of some small animal to make it air-tight, and attached to the extremity of a small canula, by which it is distended with air or water from a bag or syringe at the outer end, with a stopcock or valve, to keep the air in when received, is a description of the apparatus.

The thinnest silk ribbon of different breaths, with the edges neatly sewed together, so as to make it tabular, and then varnished with prepared linseed oil, which dries upon it, and leaves the surface perfectly smooth and soft, is what I have found to answer best. The gut of any small animal will form the lining; but that of the cat is preferable on account of its thinness and strength. The canula may be of elastic gum, or of the flexible metal used to make the metallic bougies, or of silver; and the injected air may be retained, either by a stopcock at the outer extremity of the canula, or by a valve at the silk tube or bag itself. This last method is the only one applicable to the insulated dilator, which is a short length or bulb of the lined silk, to be distended and left in the canal, and having a bit of canula in the centre, for the free passage of the urine; the patient while wearing it being little incommoded by its presence.

The dilator, when empty, is introduced or withdrawn with the greatest ease to the patient.

As the shape of the silk tube is in our power, it may be made so as to have any desired form when distended; and the

sizes of dilators may be aseertained with as much precision as of the metallic bougies. It has the important property also of being permanent in its dimensions. On one or two oceasions, where a silk tube of the size wanted was not ready, I substituted sewed bladder; but I found that in the moisture and warmth of the urethra, this yielded in the eourse of a little time, so as to become of double the original diameter, thus stretching the sound eanal on each side of the strieture beyond what it eould bear: and in any case where strong pressure were required, such a tube would burst before the effeet eould be produced.

It possesses strength to bear any degree of pressure whieh can be useful, for the membrane of the urethra itself would be torn, before a strong silk tube would give way; it is almost needless to add, that by injeeting more air, the pressure in any given ease is inereased, or that it is diminished by opening the eoek or valve.

The manner of using the dilator is as follows:—Though in general it passes as easily down to the strieture as a small bougie, yet, on some oceasions, especially in irritable urethra, unaeeustomed to the presence of instruments, I have preferred introdueing it through a small eanula, in the manner already mentioned. As soon as the bag is sufficiently within the strieture or strictures, (if more than one exist in the canal), as mueh air is to be injeeted into it as the patient ean easily bear: and during the time it remains in the urethra, the future admission or eseape of the air is regulated by his sensations; that is, if the feeling of distention abate, more may be injeeted, but if it should inerease into pain, a little of the air may be allowed to eseape.

[In the same work is an ingenious method of applying pressure to the body by means of air bandages or bags so as to envelope the parts to be subjected to the pressure of the air.]

For the bandage the equable pressure of elastie air may be substituted with great advantage, by enelosing the part to be subjeeted to it in a elose *double* case of india-rubber eloth, of rather larger dimensions than the part, in order that, upon being inflated, a thin stratum of compressed air may surround it. The outer side of this ease, or wherever it is not supported by the surface of the body, must be of strong material to resist the requisite degree of pressure, but the side in contact

with the skin should be thin, and of larger dimensions than the other, for the purpose of its coming closely in contact with all the inequalities of the surface.—*Ibid, p.* 465.

53.—*Removal of one of the Bones of the Metacarpus, the corresponding Finger being preserved.* By M. Blandin.—M. Blandin presented to the Academy of Medicine, two patients from whom he had removed one of the bones of the metacarpus, but preserved the corresponding finger. The first case was that of a woman, the first metacarpal bone of whose right hand was affected with caries. The affected bone was cut out; and when the wound was healed and the cure completed, the thumb was found to be much shortened, but very useful, quite mobile, and sufficiently strong for most purposes. She was able to use the thumb for holding the pen or needle, and used it easily both in writing and sewing. The hand, indeed, was both less mutilated, and much more useful than if the entire thumb had been removed. This was the fifth time that M. Blandin had successfully performed this operation.

In the second case it was the fifth metacarpal bone of the right hand which was diseased; and though the operation for its removal was more severe than the first, when the cure was completed the finger was not less useful, and no mutilation of the hand was noticed.—*Edinburgh Med. and Surg. Journal, April* 1841, *p.* 553.

54.—*On the Removal of Foreign Bodies in Joints by Means of Subcutaneous Incisions.* By Dr. Goyrand, of Aix.—This new method of operating was suggested by the fact, that incisions made into joints through such small external openings that the air cannot obtain admittance to the cavity, are never productive of that severity of inflammation which follows wounds with wide external apertures, and which, in the operations hitherto performed for this disease, has so often terminated fatally. The proceeding recommended by the author consists in pushing the loose body (if in the knee-joint), into the synovial pouch above and to the outer side of the patella, beneath the vastus externus muscle, and while an assistant holds it fixed there, passing a narrow knife through the skin at some distance above the joint, and through all the inter-

mediate tissues down to the foreign body. Without enlarging the opening in the skin, the synovial membrane and adjacent tissues over the loose substance are now to be freely divided, till, by the pressure on the latter, it slips out of the joint through the wound, and lodges itself in the subcutaneous cellular tissue, or in some of the other tissues between the skin and the joint. After this the patient must remain at rest several days, (the small external aperture being merely covered by sticking-plaster), till all chance of inflammation occurring has passed away. The foreign body dislodged from the interior of the joint, will form a cyst for itself, and remain in its new position without producing any annoyance; but, if it should be deemed necessary, it may easily be removed by a single incision through the skin over it, which will no longer be likely to excite any inflammation of the joint itself.

The author details a case in which this method of operating was adopted with perfect success. Two loose cartilages were dislodged, and pushed into the tissues adjacent to the joint. One was subsequently removed by an incision through the skin; the other was allowed to remain, and produced no inconvenience whatever. Through the whole course of the treatment the patient had not a bad symptom, although less precautions were adopted than are usual in this description of cases.

["We understand that Mr. Syme, of Edinburgh, performed this operation, and with complete success, without previous knowledge of M. Goyrand's proceeding."]—*Brit. and For. Med. Review, April* 1841, *p.* 526.

55.—*Nitrate of Silver in Stopping Hemorrhage after Extraction of Teeth.* By Charles Ray, Esq.—[Every medical man knows the occasional trouble experienced in stopping hemorrhage after extracting a tooth. We give the following account of Mr. Ray's plan in a case to which he was called:]

Upon placing the patient, with a slight inclination backwards, she immediately choked, and it being night, and in the upper jaw near the throat, I had much trouble in obtaining a view of the situation of the hemorrhage, which flowed as freely, with the pressure of my finger in the socket, as with the addition of small pledgets of lint, steeped in a saturated solution of alum. After an ineffectual trial of these means, I

took a stick of nitrate of silver, rounded at the extremity, and firmly forcing it to the bottom of the cavity, allowed it to remain a few seconds in this situation; very little pain was expressed, and, upon its withdrawal, I was gratified in finding a complete cessation of the hemorrhage. The mouth was kept open with a cork for about half an hour, to admit air freely, and ensure the preservation of the clot, which might have been disturbed or removed by suction; she then took forty minims of opium, and a teaspoonful of compound spirit of ammonia, and afterwards rested five or six hours. With the exception of the unpleasant *cuprous* flavour communicated to all nourishment for the next few days, nothing was complained of but extreme exhaustion, which was many months in disappearing.

[In another case of hemorrhage, from a seton which had been applied six weeks to the lumbar region of an otherwise healthy gentleman who had received some injury in hunting, Mr. Ray carefully examined the part and arrived at a small fungus, or large spongy granulation, about the size of a hempseed, which had formed, with others more healthy, near the under edge of the wound, and from this small excrescence the hemorrhage issued profusely. Taking the scissors, and separating it, I placed a stick of nitrate of silver upon its foundation, and not the slightest disposition to any return of hemorrhage followed.]

From this interesting case, continues Mr. Ray, I was led to infer that hemorrhage, occurring after the extraction of teeth, which had, perhaps, long been a source of irritation in the socket, acting as foreign bodies in the vascular situation where their natural connection was destroyed, might occasionally produce such unhealthy growths into which a large vessel might enter, and thus become the cause of excessive hemorrhage, or even death.—*Lancet, March* 6, 1841, *p.* 824.

56.—*New Mode of Introducing the Catheter in Difficult Cases.* By Dr. Charles Patterson, Physician to the Rathkeale Infirmary, &c.—Dr. O'Beirne, in giving directions for passing an elastic tube up the rectum, says: "If it (the tube) cannot be introduced higher up without much force, attach to it the syringe, and dipping the point of the latter into the

fluid to be injected, let an assistant give two or three rapid strokes of the piston, and so bring the full force of a strong and unbroken column of fluid to bear upon the point of resistance, and while this is doing, let the surgeon urge the tube firmly upwards, and it will generally pass the obstruction as if through a narrow ring."—*Dublin Med. Journal,* vol. xiv., p. 125. On reading this passage, at the period of publication, about two years back, it occurred to me that a similar manœuvre might be successfully employed to pass the catheter in those cases where enlargement of the prostate gland renders it difficult to do so. This suggested itself to me the more readily, from having been a short time previously in attendance on an old man with enlarged prostate, into whose bladder it was not easy to introduce a catheter. It was not long until I had an opportunity of putting the suggestion in practice in another patient, in whose case, the instrument not passing freely, I took a large sized silver catheter, which happened to have the eye very near the end, and introduced it as far as the obstruction; I then forced a stream of warm water through the urethra, at the same time depressing the instrument, when it immediately entered the bladder with the greatest ease.

In this case, it is most probable, that from my eagerness to try the experiment, I had recourse to it unnecessarily, and that the instrument might just as readily have passed where it did without the pioneering of the water. But in a few days I was again called to the old man above alluded to; he had been forty-eight hours without passing any water; and a practitioner, who was very expert in the use of the catheter, had already, in various attempts, failed to introduce it; I made use of every legitimate exertion and manœuvre, but was also unable to pass the instrument; I then forced a stream of water through the obstruction, when, after about two or three ounces of that fluid had been injected, the urethra became very much distended, and the catheter passed into the bladder with very little difficulty.

I have since employed the same means, under similar circumstances, on one or two other occasions, and always with success. I do not mean to say, that, in these instances, the instrument could not have been otherwise introduced into the bladder, but, having experienced much difficulty in en-

deavouring to accomplish that object, instead of persevering in embarrassing attempts, I had recourse to the above stated means, which had the effect at least of greatly facilitating the operation.

I have also used this contrivance to introduce the catheter in a case very different from the above. The patient laboured under most distressing inflammation of the mucous membrane of the urethra, and his bladder was greatly distended with urine, which he could only pass in drops and in extreme agony: there was a most unbearable desire to empty the bladder, occasioned, in a great measure, it may be presumed, by that organ's partaking of the inflammatory action. The morbid sensibility of the urethra was such that no instrument of any kind could be introduced, and the patient's impatience could not wait the abatement of the inflammation, under the employment of the most active means. In this case I attached an injecting apparatus to a curved elastic catheter, and, having inserted the extremity of the tube a little way within the orifice of the urethra, I, in the gentlest manner, injected, or rather insinuated a warm decoction of linseed, just so as moderately to distend the urethra; I then gradually urged the catheter onwards, and succeeded in getting it into the bladder, with little or no pain or inconvenience to the patient.

The injecting apparatus which I have employed is very simple; it is formed by merely attaching a small bladder to the end of the catheter, after the manner of a mounted enema pipe: the bladder need not be large, one that holds about half a pint of water will be sufficiently so; and the catheter must be furnished with a small cork, having a piece of twine fixed to it, just like the cork of an enema pipe. The largest sized catheter the urethra will admit of should be used, that the impetus of as large a jet of water as possible may act on the obstructed part of the canal, and also that the urethra being filled by the instrument, the fluid may be easily prevented from returning by the side of the catheter.

It is not difficult to comprehend the mode in which this operation facilitates the passage of the catheter. The patient's bladder, being full of urine, opposes considerable resistance to the influx of the water forced through the instrument; this fluid then, pouring into the urethra, forcibly distends that

canal and the neck of the bladder; and from the circumstances of their connexions, the distension principally takes place in the direction of the rectum, forcing the tumid middle lobe of the prostate backwards and downwards, and so diminishes the obliquity of the passage. It may be also, that when the patient's bladder admits a portion of the injected fluid, its increased distention, from that cause, aids in drawing backwards the enlarged lobe of the prostate, in the way Sir Everard Home states partial relief to occur naturally in such cases, when, about the third day of the obstruction, the bladder becoming extremely distended with urine, its posterior part bulges backwards, and draws the swollen lobe with it.

Thus the distention of the urethra, its acquirement of a more normal direction, and the altered position of the tumid lobe of the prostate gland, all concur in allowing the instrument to glide with ease into the patient's bladder.

For the injecting apparatus, a pig's bladder will be found to answer much better than an elastic bag or syringe, in allowing freedom of motion to the catheter, and ease of management to the hand.—*Dublin Journal of Med. Science. March* 1, 1841, *p.* 23.

57.—ON THE CHANGES IN THE COLOUR OF THE IRIS PRODUCED BY INFLAMMATION.

By Dr. James Hunter, Surgeon to the Edinburgh Eye Dispensary.

[We deem this a very interesting and important paper of Dr. Hunter's, and on a subject which has not sufficiently attracted the attention of even professed oculists.]

In the earliest stage of iritis, the iris contains an unusual quantity of red matter; the vessels, however, being merely distended with blood. On the other hand, in the latter stage of uncontrolled iritis, or in the sequelæ of the disease, yellow lymph is effused into the interstices of the iris, which consequently assumes a yellow appearance. In the intermediate stage, when there is both a fulness of the blood-vessels, and incipient effusion of lymph, the iris contains much reddish yellow matter. On the existence of some one of these conditions, the morbid changes observed in the colour of the iris primarily depend.

If the iris were naturally white, and if the ophthalmiæ affecting it were confined to its middle tissue, then acute cases would be always distinguished by a pinky redness, chronic cases by a primrose yellowness, and those of a subacute nature by a pale orange tint. But as inflammation may affect different parts of the iris, and as the natural colour of the organ varies much in different persons, the morbid changes in its colour will be modified by these two circumstances, especially by the last.

I. *Modification in colour depending on the seat of the disease.*—When inflammation affects chiefly the anterior layer of the iris, and is not syphilitic, it is generally subacute, and connected with strumous disease of the lining membrane of the cornea. In such cases, a change of colour is often hardly perceptible at an early stage, from the vessels not admitting many red globules; and it is chiefly in the more chronic stage that it occurs, the surface of the iris appearing of a pale yellow, or greenish yellow hue. In syphilitic iritis, the anterior surface of the iris is often greatly inflamed, of a bright vermilion, in the early stage, and orange or yellow coloured afterwards, when lymph is thrown out. When inflammation affects principally the membrane of the uvea, it is generally subacute or chronic, and often connected with some deep-seated ophthalmia, such as hyaloiditis or choroiditis. In such cases very little or no change of colour is observed. Inflammation affecting principally the true substance of the iris, and extending more or less to both its surfaces, is by far the most common form of the disease, and the one in which the morbid changes in colour are most remarkable and constant. When only the smaller circle of the iris is inflamed, and generally it is the first part affected, the change in colour will not extend much beyond it. The same may take place when the inflammation is confined to the greater circle of the iris,—a comparatively very rare occurrence.

II. *Modification in the change of colour depending on the natural tint of the iris.*—This is the main cause of the variety in the change of colour, in similar stages of iritis, in different persons. The morbid colour being always a compound of the natural colour of the iris with red, red and yellow, or yellow, according to the stage and severity of the inflammation. The

following are the more common natural varieties in the colour of the iris:—Deep blue, or greyish blue; greyish blue with yellow markings, appearing greenish at a distance; basalt black; clove brown; hazel; citron, or wax-yellow. The first three varieties are most common in fair persons, the others in those of a dark complexion, though there are many exceptions. Besides these, there are several minor natural varieties; but most of them may be referred to one or other of the foregoing classes. The whole iris is not always of the same colour; the smaller ring being frequently of a lighter or darker, or even of a totally different hue from the rest of it. Attention to this is of some importance, in judging of the morbid changes in colour. When the chief part of the iris is deep blue, the inner circle is often bluish grey, or *vice versa*. In other cases, a generally blue, or bluish grey iris, has an inner ring of a citron or wax-yellow colour. A dark iris, with a yellowish or light olive inner circle, is also frequently met with; but a blue iris, with a hazel or inner ring, or a dark iris, with a light blue one, are very rare varieties. The irides of the right and left eyes are for the most part alike; and when the colour of one has been changed by disease, it may, with very few exceptions, be correctly assumed to have been originally the same as that of the other. In some extremely rare cases the iris is of a different shade, or even of a totally different colour, at the opposite sides of the pupil.

The following are the changes of colour usually observed in a naturally full blue iris, in the successive stages of inflammation, affecting its whole thickness, and allowed to go on till it produces permanent organic injury. At first the iris acquires a more or less deeply purple tinge, from the combination of red blood with the natural blue of the part. In the next stage, when yellowish lymph begins to be exuded, and there is still much red blood in the vessels, the iris becomes almost quite black in some cases, but more frequently of a hornblende, or basalt black, with a tinge of green. In the third stage, when a much greater quantity of lymph is exuded, the colour gradually acquires a greenish cast, very dingy and neutral at first but brighter afterwards, and approaching to grass-green in the sequelæ of the disease, when the increased

vascularity has quite subsided. This green colour is caused by the combination of yellow lymph with the natural blue of the iris.

The blackening observed in the transition stage of inflammation in a blue iris is most distinctly seen, and is of the darkest hue, in cases of severe traumatic general ophthalmia, where, along with the extensive effusion of pus and lymph, there is very great vascularity. For a long time this change seemed to me quite anomalous and inexplicable, on the same principle as the other changes in colour, viz., the combination of their primaries. Theory suggested that the blue iris should become white rather than black, seeing that, in this second stage of inflammation, it contained both blue, red, and yellow matter, when combined, as is often done experimentally, form a somewhat whitish compound. After many experiments, I found that, unless the primary colours be in certain proportions, the compound will be black instead of white; and I have since learned that dyers are well aware, that, to produce the finest black, the goods should be dyed successively with all the three primary colours; a circumstance corroborated by a distinguished artist to whom I mentioned it.

Thus, the blackening of a blue iris, in the second stage of inflammation, is no longer an anomaly. On the same principle may be explained the ashy black colour (resembling protoxide of mercury), so generally observed in the first stage of inflammation in an iris, the natural colour of which is light or greyish blue, mixed with fine streaks of yellow.

The principles which determine the successive development of different colours in a naturally blue iris are equally applicable to other cases, where the original colours are different. The morbid colours being always the result of a combination of the natural ones, with red blood, red blood and yellow lymph mixed, or yellow lymph alone, as shown in the following table. The changes of colour observed in practice are almost identical with, or differ very slightly from those which may be produced artificially by similar combinations.

The practical utility of the changes produced in the iris by inflammation is considerable, both in the diagnosis, and in the treatment of iritis.

TABLE *of the more common Changes in the Colour of the Iris, observed during or after Inflammation,*

Natural Colour of the Iris, or of the inflamed portion of it.	MORBID COLOURS. First Stage of Inflammation, before lymph is effused.	Transition Stage—increased vascularity and commencing effusion of lymph.	Third Stage, when lymph is effused, or in the Sequelæ of the Disease.
Blue.	Purple of a campanula, imperial, or plum shade.	Black, hornblende black, or greenish black.	Dingy green, sap green, or grass green.
Blueish grey, with yellow markings.	Basalt black, or greyish black.	Apple bark green.	Yellowish green.
Basalt black.	Brownish black.	Chesnut.	Hazel, wood brown, light olive or wax-yellow, according to the depth of the original colour.
Clove brown.	Reddish black.	Lighter chesnut, or hazel.	
Hazel.	Brownish red, or tile red.	Wood brown, or very light hazel.	Tawney orange, or amber yellow.
Citron, or more or less of a yellow hue.	Deep orange.	Lighter orange.	Light yellow.
Transparent and nearly colourless —*the anterior serous layer.*	Arterial red.	Reddish orange.	Very light, or primrose yellow.

1. *In the Diagnosis.—(a)* To an experienced eye, the most unequivocal objective symptoms of incipient inflammation of the iris are a slight thickening or puckering, and a want of sharpness in its pupillary edge, along with a degree of mud-

diness in the anterior chamber, and diminished lustre of the pupil. Many persons, however, find considerable difficulty in appreciating these appearances in their very slightest form; and to them the change of colour is a much more striking symptom. *(b)* When the cornea is irregular or ulcerated, the proper sharpness and lustre of the pupil often appear defective when they are not so, owing to the irregular refraction of the cornea. In such cases, any change in the colour of the iris is nearly as perceptible as ever, and it then becomes an objective symptom of first-rate importance. *(c)* The nature of the change in the colour of the whole iris, or of certain parts of it, illustrates the stage of the inflammation; the general rule being, that the iris becomes darker in the earlier stage, and lighter afterwards, when lymph begins to be effused in considerable quantity. In applying this rule, regard must be had to the natural colour of the inflamed part. Thus, if the inner circle of an iris, naturally of a yellow hue, become somewhat orange, the first stage of inflammation is indicated; but if the same tint be assumed where the original colour is hazel or dark brown, then the third, and much more serious stage, is indicated. Again, a blue iris, with a yellowish green inner circle, may be a perfectly natural appearance, but if it be known or suspected that the original colour of its inner circle was bluish-grey, then this yellowish green colour is a morbid appearance, indicating a present or past state of severe inflammation; so, in other cases—the great object being to observe accurately the existing colour of the larger or smaller circles of the iris, and to compare it with their natural colour.

2. *In the Treatment of Iritis*, a minute attention to the colour of the iris is highly useful. *(a)* In determining when the employment of mercury becomes almost a *sine qua non*. Incipient rheumatic iritis may be often cured by leeching, colchicum, and sudorifics, which frequently require to be used for sometime before they remove the disease. But, whenever there occurs a change in the colour of the iris, indicative of the commencing effusion of lymph, mercury (unless most specially contra-indicated by some other circumstances in the condition of the patient) must be administered, and speedily too, or else the mobility of the iris will be permanently impaired, or extensive adhesions aud even closure of the pupil be almost

inevitable. (*b*) In chronic cases, the progressive restoration of the natural colour of the iris is a good test of the efficacy of the means employed, whether mercury, iodine, or oil of turpentine; and for deciding on the propriety of continuing their use. (*c*) Whenever the change of colour in the iris indicates the recent and extensive effusion of lymph into its interstices, there is great danger of a slow and gradual closure of the pupil taking place for some weeks or months after all inflammatory action has subsided, and the cure apparently complete. In such cases, the daily use of belladonna, or hyosciamus, to keep the pupil moderately dilated, becomes an essential point of treatment. (*d*) When the pupil is closed either by lymph, or by entanglement of the edges of the iris in a penetrating ulcer of the cornea, or in the cicatrix, after the extraction of a cataract, or from other causes, and an operation for an artificial pupil is contemplated, any change in colour, indicating the matting together of the iridal fibres with lymph, should becarefully noted. In such cases the prognosis as to the probable utility of any operation, such as "incision" *(iridotomia)*, or "simple ciliary separation," *(iridodialysis)*, the success of which depends on the contraction of the liberated portion of the iris, should be extremely dubious, and a preference given to "excision," *(iridectomia)*, or to "compound ciliary separatioon," the separated portion being either drawn out and cut off, *(iridectomedialysis)*, or left strangulated in the wound of the cornea, *(iridencleisis).—Edinburgh Monthly Journal of Medical Science, Feb.* 1841, *p.* 79.

58.—*Treatment of Swelled Testicle by Compression.* By J. Dixon, Esq., Coleford, Gloucestershire.—[The following plan of treating orchitis, by strapping the testicle with adhesive, mercurial, ammoniacal, or iodine and belladonna plasters, has already been pointed out in Vol. II., Article 111. We need, therefore, scarcely again refer the reader to it. Fricke, of Hamburgh, and subsequently M. Ricord, of Paris, have been chiefly instrumental in introducing this excellent improvement into the practice of surgery. Mr. Dixon proceeds in his paper as follows:]

The difficulty experienced too frequently in remedying those chronic enlargements of epididymis which remain after acute

inflammation of the testicle, whether the consequence of gonorrhœa or injuries of that organ, will, I have no doubt, be obvious, to many in the profession, as affording a considerable degree of annoyance to the patient, as well as some slight discredit to the practitioner. From the depending position of this organ, the high degree of vascularity which it possesses, as well as the readiness with which it throws out lymph into the surrounding tissues, or connecting medium of the convolutions of the vas deferens, all seem to conduce to the difficulty of the absorbents, to remove the deposited lymph which they would naturally do in a comparatively short period in other parts of the body, after the more acute symptoms have been subdued by appropriate treatment.

The method I have adopted is the following: placing the patient upon his back, and seizing the testicle with the left hand, and applying slight pressure, so as to empty the veins of the part as much as may be practicable; then applying with a graduated pressure, a narrow piece of adhesive plaster from the commencement of the cord at the upper part of the scrotum, and encircling the whole of the testicle, without putting the patient to any severe pain; it will require in the course of twelve or twenty-four hours, to be again repeated; owing to the diminution of the swelling, the effect of the pressure is consequently diminished. The usual purgatives and other anti-inflammatory medicaments ought not to be neglected; at the same time, some slight objections have been offered to this plan of treatment in the more severe forms of orchitis, owing to the severe pain often experienced by the patient. I can state that the pain, however, is not by any means severe or continued, if the pressure be judiciously employed, and therefore ought to offer no insurmountable barrier to the adaptation of a remedy at once simple, scientific, and highly beneficial.—*Lancet, Dec.* 5, 1840, *p.* 374.

59.—TREATMENT OF UN-UNITED FRACTURE BY COMPRESSION AND FORCIBLE APPOSITION.

By Sir Benjamin Brodie, F.R.S., &c., &c.

[In a discussion in the Royal Medical and Chirurgical Society respecting the union of fractures of the neck of the thigh bone, Sir Benjamin Brodie makes the following observations respecting un-united fractures:]

Some years ago he had made some experiments on the mode in which fractured bones united, and he had come to the same conclusion as M. Dupuytren, without having been aware that he had been pursuing the same inquiry. The result of these experiments had satisfied him that union at first depended more upon the neighbouring cellular tissue than upon the periosteum, whatever part the latter might afterwards play in the process. He might take this opportunity of remarking, that he had found the most successful plan of treating un-united fracture, to be that pursued by Mr. Amesbury, and consisting in the binding of the limb in an immovable apparatus, by which the extremities of the fractured bone were kept in a state of forcible apposition for a long period. The plan was a very painful, but a very successful one. He had succeeded in procuring union, by this mode of proceeding, in one case, in which the fracture had been un-united for two or three years, and a seton had .been passed through it without benefit, the arm remaining dangling and useless. In the experiments he had alluded to, only one case of union by ligament occurred, and this was in a fracture of the femur of a rabbit. He had endeavoured to account for this deviation from the general rule, but had not succeeded.—*Lancet, Dec.* 5, 1841, *p.* 381.

[On this subject there occurs a good illustrative case in Dr. Norris's Report of Surgical cases, treated in the Pennsylvania Hospital. It is given as follows:]

Michael Ward, ætat. 50, and enjoying good general health, was admitted September 14th, with an un-united fracture of the femur. He states that he received his accident in the middle of last February, by the fall of a bank of earth upon his limb. His left femur was broken obliquely in its lower third, together with both bones of the leg of the same side a short distance below the knee. After a treatment of seven or eight weeks, with long splints (probably Dessault's) he was suffered to get up and move about, the union of the bones of the leg being firm, though somewhat deformed, while the thigh was much deformed and ununited. In August he set out from Ohio for Philadelphia, and performed one-half the distance on foot, with the aid of crutches. On admission, the left limb was found to be two and a half inches shorter than that of the opposite side. The lower part of the thigh was enlarged,

owing to a great mass of callus which had been thrown out around the seat of fracture, and was much bent outwards, the lower fragment being drawn to the outer side of the limb. When placed in the erect position, he was unable to bear any weight upon the limb, and upon attempting to do so the motion of the lower upon the upper fragment, was very evident both to the patient and observer. Strong extension had no effect in bringing down the limb to its natural length, and all that was proposed by the treatment was to produce union of the fragments, and, if possible, a diminution of the deformity by rest and pressure without attempting the shortening. For this purpose a roller was applied from the toes upwards, after which strong pressure was made over the projecting portions of bone by means of a bandage secured to a well padded long splint placed upon the inner side of the limb. This apparatus was continued until October 14th, the bandage being tightened every few days. At this date the limb was found to be free from swelling and the deformity evidently less. Union also appeared to be firmer. The apparatus was re-applied, and in order to keep up as much pressure as the patient was able to bear, a tourniquet was applied immediately over the point of fracture. On the 31st of October the apparatus was removed for the purpose of accurate examination, and it was found that the limb was lengthened half an inch since the commencement of the treatment; that the deformity was less, apparently from absorption of a portion of the callus, which had been deposited on the outer part of the limb, and that no motion could be discovered at the point of fracture, or any grating sensation perceived when the weight of the body was borne upon it.

Dr. Norris observes that, in the first case, the non-union was probably the result of the want of proper support and pressure—in the second case, of the same circumstances, in addition to the existence of a fracture of the leg. For, where more than one fracture exists in the same person, firm union may take place in one some time before it occurs in the other. Pressure and rest are best adapted to cases of no long duration, and to young persons. Dr. Norris prefers the tourniquet to other means.—*American Journal of Medical Sciences, and Medico-Chirurgical Review, Oct.* 1840, *p.* 553.

60.—*On Congenital Opacity of the Cornea.* By S. Crompton, Esq., Manchester.—[In article 41 of our first vol., we related an interesting case given by Mr. Walker, of Manchester, of congenital opacity of the cornea, which that excellent practitioner considered to be owing to purulent ophthalmia before birth. In a paper published by Mr. Samuel Farrar, surgeon, of Deptford, in 1790, cases of the same description are related. The corneæ of both eyes, in one case, were opaque. But about ten months after birth the opacity diminished and sight was completely restored. The same thing happened in another case, in which sight was restored in about the same time. (See Med. Gazette, December 11th, 1841, p. 434). Mr. Crompton relates his case as follows: and we may here state that it was the younger of these cases to which Mr. Walker referred in his communication to which we have before alluded.]

There are two brothers in Manchester who are commonly supposed to have been born with opaque corneæ. The elder boy is eighteen years old; the younger three; and they are the second and tenth of a family of ten children of the same parents: the eyes of the rest being perfect.

The right eyes of both brothers are staphylomatous; the staphyloma being much more prominent in the eldest boy.

Their left eyes agree in the following particulars:—They are very small, and soft to the touch; the line of union of the sclerotica and cornea is irregular, and less distinct than is natural. The irides are blue, and very convex. The eye-balls are wanting in plumpness and rotundity, and look unfinished.

In the younger boy's left eye, an opacity of the cornea keeps a part of the pupil out of sight; and, at the upper part, there is an irregularity in the outline of as much of it as is visible. But the elder boy has a regular pupil, and the whole of his cornea is quite transparent, saving a small portion of the lower part of it at its junction with the sclerotica, and I am not sure whether this opacity is not from an encroachment of the sclerotica at this point, and a result of the irregular line of union of the cornea and sclerotica, of which I have already spoken.

The mother states that on the day after he was born, she discovered that the eyes of the elder of these two boys were "not right." She was led to examine them by observing,

when he was asleep, a prominence of the upper eyelid of the *right* eye. On looking at this eyeball, she discovered that it was far from being as it ought to be. It projected at that time as it does now, but not so far. The front of the *left* eye was partly covered by a "pearl." This opacity grew thin first of all at the outer edge of the cornea: that portion of it which was at the nasal margin of the cornea being the last to gain its transparency.

Her tenth delivery was attended with danger, and her surgeon tarried awhile with her. Before he left the house, the nurse discovered that the child's eyes were not right. They were shown to him immediately, that is to say, not later than one hour after birth. He gave her the same opinion that she got respecting her eldest boy, viz., that medicine would do no good. Most positively, there was no running of matter from this boy's eyes; there was no discharge whatever; neither were the eyes bloodshot, nor were the eyelids swollen.

Mr. Barton, the senior surgeon to the Manchester Eye Hospital remembers meeting Mr. Allen in consultation upon the youngest of these two children. He considered the eyeballs to be imperfectly developed, and from the testimony, he felt assured that the opacity of the cornea was congenital.—*Medical Gazette, Dec.* 11, 1840, *p.* 432.

[We give these two cases because it may happen at some time or other for any practitioner to meet with similar ones which he may not be able to account for; and if he were not able to refer to well marked cases of congenital disease, it would be at once supposed that the disease producing the opacity had been progressing after the birth of the child while he had neglected to notice it.]

61.—*On Baynton's Method of Treating Ulcers.* By Joseph Bell, Esq., Barrhead.—[Mr. Bell brings forward twelve excellent cases to show the efficacy of this mode of treatment which he justly supposes has fallen too much into disuse. There is no doubt that the practice is excellent; but the troublesome attention which it constantly requires must always be an impediment to its general and continued use, especially amongst the classes of poor people in whom the most troublesome cases occur. Mr. Bell says,]

Baynton's system consists of three parts:—First, straps of adhesive plaster, from two to three inches broad, and of sufficient length to surround the limb, and to overlap a few inches. These straps are to be applied by placing the centre of the strap exactly opposite the ulcer, over which the free ends are to be crossed, pulling them as tight as the feelings of the patient will permit. The first strap is to be placed a little below the lower margin of the sore; the second is to overlap it a little; the third to overlap the second a little; and so on until the ulcer is completely covered; a soft piece of cloth is then to be placed over the ulcer; but I frequently dispense with this. Secondly, a bandage is to be applied, from the extremity of the limb to the articulation above the sore. Thirdly, this bandage is to be kept constantly wet with cold water. The dressing to be changed every day, or every second day, according to the quantity of discharge and irritability of the ulcer. Such, then, is the Bayntonian system, which when properly applied, is competent to cure, speedily and effectually, the irritable or inflamed, and the varicose, as well as the indolent or callous ulcer; proper attention of course, being paid to the improvement of the general health—a *sine qua non* in every plan of treatment.

In the absence of all practical experience on the matter, the system strikes us as admirably suited for "irritable ulcers," which differ chiefly from those of an indolent nature in an inflammatory state of the integuments, with infiltration into the adjoining cellular substance. No better means can be employed to remove these conditions than the bandage and cold water. The pressure removes the inflammation, empties and supports the overloaded and enfeebled capillaries. The cold water is a powerful agent in the removal of the cutaneous inflammation; by decreasing the high temperature of the part, it produces a sedative effect. But these are not the only benefits derived from the bandage and water; they also act as stimulants to the ulcer, and thus establish a new and healthy action in the sore, which is at the same time kept constantly clean. I humbly submit, if this be not as rational a plan to remove the inflammatory condition which surrounds these ulcers, as either leeching or poulticing; and then it has this very great advantage, that the patient can walk about during the time his sore is healing.—*Medical Gazette, Jan.* 8, 1841.

62.—*New Operation for Secondary Capsular Cataract.* By M. Sichel.—Secondary capsular cataract is one of the most frequent consequences of the operation for cataract, either by extraction or depression. The extraction of secondary capsular cataract, through the cornea, is always a matter of great difficulty, because the surgeon often fails in trying to bring the opaque membrane forwards by means of the forceps or hook; it generally escapes backwards, and many unsuccessful attempts are made before it can be seized with the instrument. Prolapsus of the iris, followed by staphyloma, irregularity, or even obliteration of the pupil, may result from such attempts. In order to avoid these accidents, M. Sichel proposes to extract the opaque capsule through the sclerotic, in a manner somewhat different from that practised by Bell, Earle, and other ophthalmologists, for the removal of lenticular cataract. The usual way of dividing the sclerotic coat has been by a *vertical* incision; hence, when the external rectus muscle contracts, it constantly separates the edges of the wound, and diminishes the chances of success. M. Sichel, then, applies this method to secondary capsular cataract; but instead of a vertical incision, he makes a small transverse one, parallel to the fibres of the external rectus muscle, as high up as possible, and uses an extremely fine forceps. Four successful cares are given in illustration of this method.—*Provincial Med. and Surg. Journal, Jan.* 9, 1841, *p.* 255.

63.—*Mode of Preventing Contraction after Burns.* By the late Mr. Earle.—[We give the following extract from the lectures of this lamented surgeon, in order that the practice may be diffused as much as possible.]

I am quite ready to admit that it is not in our power to arrest the law of nature, by which a cicatrized surface becomes smaller, and occupies less space than the original wound; but it is in our power, in most cases, to direct and modify that which we cannot wholly prevent; and thus, at all events, to counteract its injurious effect. To take the upper extremity as an example, I will suppose a case, where the whole integuments on the inner and front part of the arm and forearm have been destroyed. If such extremity be kept carefully extended on a splint, *not only during the whole process of*

healing, but long subsequent to the perfect cicatrization, you will find that the cicatrised surface will diminish in a circular direction, drawing the healthy integuments together from side to side, but that no contraction will take place in the long axis, in which alone it can impede the due motions of the limb. This permanent extension should be persevered in during the *day and night*, until all changes have ceased, and the cicatrix has contracted to its smallest dimensions. Care, however, should be taken, during this time, to give passive motion to the different joints, by which the proper secretion of synovia will be kept up, and the eventual free use of the limb will be ensured. This plan of maintaining the limb in a state of permanent extension should be commenced as soon as the wound has begun to granulate.—*Brit. and For. Med. Review, April* 1841, *p.* 315.

64.—*Chloride of Zinc in Acute and Chronic Gonorrhœa.* By M. Gaudriot.—After a large number of observations, the author of this memoir concludes that the chloride of zinc, properly diluted, has a remarkable power in curing simple gonorrhœa of the urethra and vagina, also in dilating the urethra, and thereby ameliorating strictures. He believes that it is always by an inflammation *sui generis* that the discharge is cured, and that injections of the chloride of zinc determine a series of phenomena not produced by other caustics. It is only necessary to use a few drops of injection, as the extremity of the urethra is the only part to which it should be applied. To combat vaginal gonorrhœa in women, M. Gaudriot proposes a new proceeding, which consists in the use of solid vaginal suppositories, composed of a paste made to melt easily, and containing a certain quantity of liquid chloride of zinc and sulphate of morphine.

In men the author employs the following formula:

Liquid chloride of zinc, 24 to 36 drops.
Distilled water, four ounces.
Agitate and filter through paper.

A small quantity of this solution should be injected about an inch along the urethra, two or three times a day.

The vaginal suppository which he employs is formed of

Liquid chloride of zinc, five drops.
Sulphate of morphine, half a grain.

Mix with three drachms of the following paste:—

Mucilage of gum tragacanth,	6	parts.
Powdered sugar.....	3	„
Starch powder	9	„

To cure radically a gonorrhœa in man, it will ordinarily suffice to apply two injections a day for two or three days. The first injections are almost always followed by more or less swelling of the glans penis, but this does not prevent their continuance.

In women four or six suppositories, one being introduced every day, or every second day, suffice to obtain a cure. The first introduction frequently occasions a swelling with more or less heat of the vulva, but these phenomena are soon completely dissipated. Emollient baths have in most of the cases been employed for this purpose.—*Ibid, p.* 529.

65.—*Radical Cure of Varicocele by Invagination and Shortening of the Scrotum.* By Dr. Lehmann.—The mode of operating here recommended is very similar to that which the author has in several cases adopted successfully for the radical cure of hernia. A portion of the relaxed and elongated scrotum is to be pushed up on the forefinger of the left hand, and *invaginated* into the part above it, till the finger reaches the external abdominal ring. Holding the parts in this position, a broad curved needle, with a double thread passed through an eye near its point, is to be carried along the left finger, through the bottom of the inverted portion of the scrotum, and to be made to penetrate it and the integuments immediately over the external ring. The thread is then to be removed from the eye, and the needle drawn back and again carried through the inverted portion of the scrotum and the integuments at a distance of about half an inch from the parts previously penetrated. The threads passed through the two apertures being now drawn, the invaginated portion of the scrotum may be pulled up to any desired height; in general it must be drawn very nearly to the external ring; for in the subsequent progress of the cure the relaxation of the parts is so great that the folds and wrinkles thus produced are almost entirely obliterated. The threads then having been drawn, must be left for eight or nine days, under a soothing and cooling regi-

men, by which time adhesion will have taken place between them at the cut edges, and, by the excoriation which the discharge produces between the opposed surfaces of the inverted portion of the scrotum and that into which it is pushed.

The author relates six cases in which his mode of operating was adopted with success; but in none of them had sufficient time elapsed before the publication of the paper to enable one to say whether this measure was likely to be mere permanently beneficial than the others which have been proposed for curing varicocele by bringing on the same change in the scrotum. Of all these the simplest, and as far as we have seen, the most successful, is that recommended by Mr. Wormald. (See Brit. and For. Med. Review, vol. VI., p. 274.)—*Brit. and For. Med. Review, April* 1841, *p.* 529.

66.—*The Steam Apparatus.*—The application of steam to the surface of the body, as a remedy in certain diseases, especially of the skin and joints, has been long known and appreciated. But the use of the vapour bath has been attended with so many inconveniences, and when the requisite precautionary measures, either before or after its operation, have been neglected, with so many evil consequences, that lately it has been but seldom had recourse to in hospital, and scarcely ever in private practice. An ingenious and simple contrivance has, however, been lately invented by a Frenchman of the name of Duval, which seems to remove all the difficulties above alluded to, and which, from the success which has attended its use during the last two years in the hospitals of Paris, and lately in London, promises to become an important addition to the "armamentarium" of the medical practitioner. The apparatus in appearance is somewhat elegant, is comprised in so small a space that it may readily be carried in the hand, and may be applied either locally or generally, as circumstances may require, with equal facility. It consists of a reservoir for the water, capable of containing a little more than a pint, supported upon three metallic rods, and having a coverlid which is furnished with two openings, one at the centre and one towards the side. From that in the centre arises a tube, terminating in a hollow globe, having attached to it, and communicating with its interior, three short branches.

furnished with moveable lids. A similar branch is connected with the opening at the upper edge of the reservoir. Beneath, on a pan supporting the parts already described, is placed a spirit lamp, having four burners, and these, when lighted, quickly vaporize the water in the reservoir above. The steam is then conducted to the globe, and thence, by means of short pipes slightly curved, and which may be connected with any one or all of its branches at pleasure, to the part of the body required. The force and the quantity of vapour expelled, is regulated by a key at the side of the principal cylinder, and which will diminish or enlarge its diameter much on the principle of the ordinary stopcock, while its escape upwards is entirely and instantly prevented by exposing the opening at the edge of the reservoir. The way in which it has been used for affections of the joints is simply this—the patient covers the wrist, for instance, with a piece of flannel, large enough for its edges to fall on a pillow, which is placed to support the fore-arm. The nozzle of one of the tubes is then placed beneath the funnel, and the steam allowed to escape. The joint thus enveloped in steam, has usually been allowed to remain for about half an hour; the application being made once a day, or oftener, as the circumstances require. Various modifications of the tubes for different purposes are capable of being adjusted to the openings in the reservoir; but the above-mentioned forms have been found sufficient for such cases as those about to be noticed.

The vapour bath in this form has been introduced into Guy's Hospital within the last two months, and has since been used extensively, and with considerable benefit.

The apparatus is thus used:—The patient lies supine in bed, and three or four arches of wood, or other convenient material, are placed across the body, so as effectually to raise the blanket from any contact with it. The apparatus is supported on a stool at the foot of the bed, and one of the pipes allowed to project into the arched cavity, which soon becomes filled with the vapour. In this way all the inconveniences attending a removal to and from the bed are of course got rid of.—*Prov. Med. and Surg. Journal, Dec.* 19, 1840, *p.* 205.

[The editors of the Provincial Med. and Surg. Journal add that the invention of the steam apparatus is due to Dr. Macartney, who brought it into notice in 1820.]

67.—*Solution of Common Salt as an Eye Lotion in Ophthalmia.* By Dr. Isaac Hays, Surgeon to Wills' Hospital, Philadelphia, Physician to the Orphan Asylum, &c.—Dr. Hays strongly recommends a saturated solution of common salt as a lotion in ophthalmia. He thinks that in many cases of chronic granular ophthalmia, it has contributed more to the cure than any other application. He was led to its employment on the recommendation of an old woman, and has since then employed it in numerous cases with the most striking benefit. In some conditions of chronic granular ophthalmia, as where the eye is irritable, with injection of the conjunctiva of the ball, and lacrymation, he knows of no remedy which affords such prompt and marked relief.—*American Journal of Med. Science, and Edinburgh Med. and Surg. Journal, Jan.* 1841, *p.* 260.

68.—*Treatment of Fissures of the Anus by Rhatany Root.* By Prof. Trousseau.—M. Bretonneau appears to have been the first who recommended the rhatany root for the cure of fissures of the anus. He was led to try its effect in this complaint from remarking, that constipation is in most cases the cause of the fissures, and the great obstacle to their cure. That this constipation is, in a great majority of cases, attended with a dilatation of that portion of the rectum immediately beyond the sphincter, which forms thus a place of lodgment for the feculent matters, which sometimes amass there to such an extent, as, when expelled, to cause pain equal in severity to those of delivery. To correct this morbid state of the gut, whether it was accompanied with fissures or not, and restore it to its original tonicity, was the object which M. Bretonneau had in view in employing the rhatany root. In several cases then of this state of the gut, attended with fissures of the anus, he found, that he effected a cure both of the constipation and the fissures, by administering in glyster, the extract of rhatany root, with the addition of a small quantity of the alcoholic tincture of the same.

Since the period when this mode of treatment was first made known, M. Trousseau has cured four cases, M. Marjolin one, and M. Berard, junior, two.

The mode in which M. Trousseau employs the rhatany root is the following. He administers to his patient every morn-

ing a glyster of marsh mallows decoction, or simply of water, with the addition of olive or almond oil, in order to clear out the intestines. Half an hour after the intestine has been emptied, he gives an injection composed of thirty-eight drachms of water; one to two drachms and a half of the extract of rhatany; and five drachms and a half of alcohol, which the patient is desired to retain, if possible. The same styptic injection is repeated in the evening.

When the pain is once moderated, only one glyster is given daily; and when the cure appears to be completed, every alternate day only, for a fortnight longer.

He says he has derived considerable advantage from the employment of an ointment composed of one or two parts of the extract of rhatany to five of the butter of cocoa.—*Edinburgh Med. and Surg. Journal, Jan.* 1841, *p.* 263.

69.—*Suspensory Apparatus in the Treatment of Fractures of the Leg.* By J. Luke, Esq.—[Mr. Luke gives us an outline of his apparatus for suspending the fractured limb, which, although not new, deserves to be again pointed out to the profession, as many will no doubt be ignorant of it.]

The apparatus is very simple in its character, consisting merely of a leg-rest, for which a long thigh splint, or a narrow board may in its absence, be used as an imperfect substitute, two splints, and a cradle. The first, or leg-rest, may be made either of wood or sheet iron, the upper surface of which is hollow, and roughly shaped to the form of the back of the leg. An oval hole is made at its lower extremity for the reception of the heel, and at the upper extremity it is sloped off to adapt it to the very trifling angle formed between the thigh and leg when the latter is suspended. The rest is of sufficient length to reach from the foot to about five inches above the knee-joint on the posterior surface of the thigh, and so fitted to the ham as to afford support to the extremities both of the tibia and femur, and to remove all strain from the ligaments, by which they are united. At the lower extremity is attached a foot-piece ten inches in length, and at a right angle with the rest, but capable of being inclined to either side should the position of the foot, which it is intended to support, so require. The rest is rounded on its under surface, and by being divided in the middle into two

parts, which overlap each other, is capable of adaptation to the various lengths of the legs of different individuals, and of being securely fastened by a thumb-screw placed underneath, when it has been properly adjusted. The maximum length to which it can be adjusted is about twenty-six inches, the minimum length about twenty-one inches. Its breadth from side to side, at the upper extremity, is five inches, and at the lower extremity four inches.

The two splints and the cradle, being similar to those in ordinary use, need not any description. The latter, however, should be made of iron rod three-eighths of an inch in thickness. The dimensions of the cradles in use at the London Hospital are sufficiently ample for the purpose of suspension, and admit of being covered by the bed linen. They measure in length about fifteen inches; in height from the bed fourteen inches; and in the width of the opening fourteen inches.

In applying the apparatus to its proper use, the leg-rest and splints being sufficiently padded, the fractured limb is adjusted on the former, and secured by the latter, placed one on each side, and fastened by tapes carried around the whole in the usual way. This being satisfactorily accomplished, the rest, &c., is suspended by means of two other tapes, passed under it and over the middle bar of the cradle, now put in a convenient position over the limb. One of these tapes should be placed near to the ankle-joint, and the other a little below the knee, and both so arranged as to slide easily on the bar above and the leg-rest beneath. In suspending the apparatus care should be taken that it be not elevated too much, since two inconveniences arise therefrom, the one of which results from the too great elevation becoming irksome to the patient; the other from the suspending tapes becoming too short to admit of the apparatus swinging sufficiently easy to follow the motions of the body. The only elevation necessary for the attainment of the required objects, is that which will enable the rest to swing without coming in contact with the surface of the bed. But this contact sometimes is caused by the sinking of the cradle on a soft bed—an occurrence, however, which is easily obviated by placing a thin board under it of a size somewhat larger than is sufficient to cover the area on which the cradle rests.—*Medical Gazette, Jan.* 22, 1841, *p.* 652.

70.—*Unguentum Æruginis in Burns and Scalds.* By E. G. S. Gaozey, Esq., Camborne.—The best treatment that I have found, as the first to be adopted in the above injuries, is the application of the unguentum æruginis, spread thickly on linen, and the injured parts to be completely covered with it. This ointment affords immediate relief, taking out the fire (as it is, in common parlance, called) sooner than any other application: and, if early applied, will prevent vesication. I have been in the habit of using it in cases, not extensive, for twenty years. The following cases will illustrate its efficacy; and, I believe that however extensive the injury may be, this is the remedy that will afford the quickest relief, being at the same time easily managed:—

Mary Trevan, on the night of the 14th of Dec., 1840, was sitting up with a sick friend, who was labouring under a very severe relapse of puerperal peritonitis. While seated before the fire in the bed-room, her head enveloped in a child's robe, she fainted and fell on the fire, her face resting on the upper bar of the grate: the sick woman heard the fall, saw the flame, but was unable to get out of bed; but fortunately, her former attendant who, fatigued, was lying besides her soundly asleep, she succeeded in awaking; the latter got out of bed, and found Mary Trevan, as above described, with cap and robe in flames, and still insensible. She threw her back, put out the flames, and in so doing severely burnt her own hands. I was not called to the case until near half an hour had elapsed. On my arrival I found the right side of Mary Trevan's face, her throat, nose, eyelids, mouth, and forehead completely roasted. I immediately covered the parts with the unguentum æruginis; the pain was almost immediately relieved. On the following morning, six hours after the accident, I removed the plasters, found the parts not the least inflamed, and my patient easy and comfortable; I renewed the application, aud let that remain twelve hours; since which time all the parts have sloughed.

My second application is, either equal parts of olive oil and lead plaster, chalk ointment, or lead liniment. This latter I have successfully used in extensive burns as the first application, but shall now abandon it for the unguentum æruginis, to which it bears no comparison. The formula for the lead liniment is as follows:—

℞. Superacetate of lead, ℈ij.; water, lbj.; olive oil, lbss.; M. To be spread with a feather over the part, and covered with a linen cloth, and renewed occasionally; the granulations to be touched daily with a caustic lotion. This is also an excellent application to the injuries of hands when burnt by the explosion of gunpowder.—*Lancet, Feb.* 13, 1841, *p.* 276.

71.—*Nature and Treatment of Choking.* By Dr. Marshall Hall, F.R.S., &c.—Choking is also another form of the croup-like convulsion, arising from a more sudden but less permanent *cause*, upon *other* incident excitor *nerves;* and it is to be treated upon precisely similar principles: *the cause must be effectually removed, and as speedily as possible.*

I was witness to a case of choking the other day; respiration was arrested; there was a fearful struggle for breath; not a moment was to be lost; I took the boy and placed him between my knees, so that I could make free pressure on the abdomen, whilst I placed one open hand on the posterior part of the thorax, and struck with the flat part of the other, gently closed, on the anterior, briskly, forcibly; the latter part of this operation was promptly performed, and the little patient was instantly relieved.—*Lancet, March* 6, 1841, *p.* 836.

72.—ON THE TREATMENT OF DEAFNESS.

By M. Petrequin.

Since the publication of M. Petrequin's memoir on the treatment of deafness by alum gargles and insufflations, (see the Medico-Chirurgical Review for July, 1839), various experiments have been made in different parts of France and Belgium, to ascertain the effects of these remedies, and the Royal Academy of Medicine has directed its attention to the subject in the course of last year. A lengthened and very favourable report has been recently laid before the medical society of Lyons, by M. Brachet, of which the following brief account may be interesting to our readers.

After alluding to M. Petrequin's opinion, that the use of the Eustachian tube is similar to that of the holes made in a drum—viz. to renew the air within the cavity of the tympanum—and presenting an abstract of the eleven cases reported at length in his memoir, the following important

conclusions drawn by M. B. from his experience are given: 1. That deafness is of very frequent occurrence in old people, in whom the mucous membranes do not perform their functions healthily, and who are subject to catarrhal congestions; also in those persons who have been subject to any of the numerous forms of inflammation of the pharynx.

2. That the inspection of the throat furnishes a means of exploration which greatly facilitates the diagnosis, by often revealing a chronic and indolent inflammatory state of its mucous membrane.

3. That Sir A. Cooper was mistaken in considering the existence of a humming noise in the ear as a symptom exclusively of nervous deafness; a form of the infirmity which is also of much less frequent occurrence than he supposed.

4. That it is a serious error to consider as incurable all cases of deafness, in which the patient cannot hear the ticking of a watch placed between his teeth; and that it is highly probable that many persons are from this mistake left without medical assistance, which if applied in time might have relieved the infirmity.

5. That the diagnosis of obstruction of the Eustachian tube, easily established when redness of the pharynx exists, is much less so, when this has disappeared, and when the lesion of the tube alone remains.

M. Petrequin, however, is of opinion that we may suspect the existence of this lesion by the varying condition of the sense of hearing in different states of the weather, and when it is somewhat better, for a longer or shorter period of time, after a fit of coughing or sneezing.

6. That the prognosis or chance of cure in this form of deafness is by no means so unfavourable as B. Bell and Sir Astley Cooper have alleged; that often it may be cured by fluid or gaseous injections, or by cauterization of the opening of the Eustachian tube in the throat, or by the use of alum applied either in the dry or liquid form to the back of the fauces—as a gargle, or as a powder mixed with sugar and insufflated upon the fauces, or, lastly the direct application of a stick of alum—recommended so strongly and used so successfully by M. Petrequin. He believes that this salt has a special effect on the pharyngeal membrane, independently of its merely astringent operation. However this may be, it

would seem that it has a most beneficial influence on many maladies of the mouth and fauces. MM. Bretonneau and Pommier have strongly recommended it in the treatment of diphtherite, Signor Bennati in various affections of the larynx, and M. Velpeau in diseases of the throat. Its administration is easy, and does not interfere with the employment at the same time of other remedies, as antiphlogistics, revulsives, purgatives, cauterization, the catheterism of the Eustachian tube, and the baths of compressed air, which have been so successfully used by M. Pravaz.

Hitherto no trial has been made of injecting a weak solution of alum directly into the Eustachian tube; but it is more than probable that the practice will be found highly useful in many cases."—*Bulletin Medical Belge.*

Remark.—The reflections of M. Petrequin, based as they are upon the results of clinical experience, are certainly well deserving of attention. We should suggest the addition of tincture of capsicum to the alum gargle, as rendering it probably still more efficient in dissipating the chronic inflammatory state of the fauces and pharynx, which, according to his observations, is so frequent an accompaniment of deafness. *Rev.—Medico-Chirurgical Review, April* 1841, *p.* 503.

73.—*Treatment of Gonorrhœa with Cubebs and Alum.*—A correspondent in the 'Journal des Connoissances Medicales' recommends very highly a combination of powdered cubebs and alum in the treatment of gonorrhœa, and adduces several cases in illustration of its efficacy. The formula which he uses is the following:—two ounces of cubebs and half an ounce of powdered alum are to be mixed well together and divided into nine doses, of which one is to be taken three times in the course of twenty-four hours.

A cure is said to be usually effected in from six to eight days.

Remark.—It is more than probable that alum has not been used in cases of gonorrhœa so much as it deserves to be. That the salt is rapidly absorbed into the system, and is eliminated, in a great measure, by the urine, appears from numerous experiments.—*Ibid, p.* 514.

74.—APHORISMS OF PRACTICAL SURGERY.

By M. Dupuytren.

Dr. Bigal, a pupil of the late Surgical *Chef* of France from the year 1818 to 1822, has published a series of aphorisms drawn from the lectures delivered by him at the Hotel Dieu. They amount to ninety; we shall select what seem to us to be the most valuable.

1. When the tibia and fibula are fractured at the same time, the seat of the fractures of the two bones is never at the same point.

2. The fracture of the upper part of the fibula is always a direct fracture, and is never produced by a *contre-coup*, as Pouteau has asserted. The patients may be able to walk about immediately after the accident. It differs from fracture of the lower part of the bone, both in its producing cause, in the absence of displacement of the fragments, and, lastly, in its mode of treatment, as nothing is required for the cure but rest.

3. Fracture of the lower end of the radius is often mistaken for luxation of the carpus backwards, and the true nature of the accident is not discovered during the formation of the callus. It is then found that the carpus projects backwards, and the ends of the radius forwards; that the extremity of the ulna projects towards the inner side of the fore-arm; that there is a sinking in of the radius, as if it had been cleft with a hatchet; and that the inner-osseous space, so necessary to the movements of rotation, is effaced.

4. Surgeons are very apt to commit mistakes in their diagnosis of the different fractures to which the fore-arm is liable; and yet it is most necessary for the judicious treatmet of each, to have formed an accurate opinion of what accident has taken place. The most frequent fracture of the fore-arm is that of the radius alone; next that of the two bones together; and lastly, that of the ulna alone. In the treatment of fractures of the fore-arm, it is always proper to place two graduated compresses, one on the palmar and the other on the dorsal surface of the limb, and also two splints, and a roller to be passed circularly round; this bandage has the advantage of keeping the two bones apart and of maintaining the inter-osseous space.

5. A fracture of the patella is never united by a perfectly formed callus within eighty days or so. The provisional callus

which exists at the end of about thirty days in other fractures, is not sufficient here.

6. What renders the consolidation of fractures of the patella difficult, is that the fibrous tissue, which is necessary to the formation of the definitive callus, exists on the anterior surface only, and not on the posterior surface, of this bone. The neck of the thigh bone is nearly in the same condition.

7. Whenever, after forty or fifty days of the treatment of a fracture, the callus becomes painful, we have reason to fear that it either has given way, or is about to give way, and that the limb will become deformed.

8. Hemorrhage from the ear, accompanied with coma, almost invariably indicates a fracture of the base of the skull.

9. Dislocations of the phalanges are usually very difficult to be reduced; much more so than those of large joints. The cause of this may be, that the lateral ligaments remain entire; but Dupuytren was of opinion, that it was attributable chiefly to the displacement of the tendons, and their escape from the groove in which they play.

10. There is one sort of luxation of the shoulder, which is exceedingly difficult of reduction; viz., that in which the head of the humerus is directed inwards and upwards, and which is usually occasioned by a fall down a staircase. The displacement is to a considerable extent; the head of the bone touching the clavicle, and being situated above the level of the carocoid process.

Dupuytron determined by numerous experiments on the dead body that the main obstacle to the reduction is that the beak of this process is often entangled in the substance of some tendon or muscle; when such is the case, no mechanical effort can overcome the resistance without danger.

11. Various accidents may arise from falling with force upon the feet; as, for example, fracture of the heads of several of the metatarsal bones, fracture of the os calcis, rupture of the vault of the foot in consequence of the ligaments being lacerated, luxation of the astragalus, and comminuted fracture of the tarsal extremities of the tibia and fibula.

12. No disease is more difficult to cure than paralysis of the arm, induced by dislocation of the humerus. The paralysis seems to arise from the stretching, compression, and perhaps also partial rupture of the nerves, which from the brachial plexus. Often no remedial means are of any avail.

13. Congenital ruptures present this peculiarity, that the seat of their strangulation is most frequently in the neck of the herniary sack, and not at the ring. Wilmer has made this remark: and Alanson also has observed, that almost all the cases, in which the stricture is situated in the neck of the sac, are cases of congenital hernia.

14. The strangulation at the orifice of the herniary sac is very common, whereas it rarely takes place at the orifice of the ring;—this opinion is not shared by all authors on the subject. (Indeed the very opposite doctrine is maintained, we believe by many surgeons. Were Dupuytren right, the operation of dividing the ring without opening the sac would be almost invariably fruitless.—*Rev.*)

15. Whenever vomiting ceases during the inflammation, occurring in cases of hernia, we may be almost assured that the intestine has become gangrenous.

16. There are few patients so apathetic and *insoucians* as those affected with diseases of the urinary passages. (We should not have thought that; urinary and rectal diseases have usually appeared to us to give rise to more than ordinary anxiety and depression. This is often the case in *renal* disease.—*Rev.*)

17. Few diseases are more difficult to cure *radically* than a very tight (tres grande) stricture of the urethra. For, after the canal has been widened by the prolonged use of bougies, there is always a great tendency to a relapse of the disease. It is then that cauterisation becomes useful, because we thus obtain a cicatrix *moulded* upon the bougie.

18. There are cases of stricture, &c., in which the keeping of an instrument in the urethra instead of being a means of cure, becomes actually an obstacle to it: Dupuytren used to cite several instances of urinary fistulæ cured by the mere withdrawal of the sound.

19. All the diseases, which proceed from contraction of the urethra, are almost invariably the result of previous attacks of gonorrhœa. The size and force of the stream of urine gradually become less and less; then it escapes only in drops, and at length there is perhaps a complete retention— a state that is usually followed either by paralysis of the bladder, or by rupture of the urethra at some point, and the effusion of the urine into the cellular substance of the perineum.

20. We frequently meet with abscesses about the anus or in the perineum in phthisical patients; and it is often dangerous under such circumstances to operate, as the thoracic symptoms are very apt to increase when the local disease is meddled with.

21. Ulcerations situated between the toes are usually very difficult to heal; this seems to be owing to the lodgment of the discharge, the admixture of the perspirable matter with it, and the constant contact of the ulcerated surfaces.

22. Of all cases of caries, the most dangerous are those in which the sternum is affected; for, when once the spongy texture of this bone becomes diseased, very troublesome fistulæ are formed, and the patient generally sinks under the effects of the disease.

23. Caries of the crest of the os ilii is a not unfrequent cause of symptomatic abscess in the lumbar and sacral regions.

24. It is a fact of almost constant occurrence, that diseases of the upper part of the thigh are felt, so to speak, at the knee, and also that those of the upper part of the humerus are felt at the elbow.

25. After amputation of the limbs, affections of the chest often supervene. Whenever we have cause to apprehend this occurrence, we should have recourse to blisters over the chest.

26. It is a curious circumstance that, in certain individuals, after lithotomy or other great operations, an abscess is apt to be formed in the calf of the leg: we cannot form any idea how this should be; but so it is.

27. In hospitals we often observe cases in which a succession of abscesses, in almost every part of the body, takes place, without any previous local or general inflammation. Such cases surely afford a proof of a purulent diathesis of the system.

28. Ambulatory or erratic erysipelas usually terminates in the formation of abscesses. These abscesses generally form without pain, and often without the patient being at all aware of their development. Such an occurrence is too frequently the image and counterpart of what is going on in some internal part; a slow inflammatory action is set up, and terminates in suppuration, without either pain, fever, or any outward symptom being manifested.

29. It is a well-known fact that all abscesses caused by smallpox exist between the periosteum and the bone, with tumefaction of the latter, and subsequent formation of a

sequestrum; but, in the majority of cases, this cause produces only a swelling of the bone with denudation. It is important to distinguish these two sets of cases.

30. Syphilitic exostoses do not always disappear, although their primary cause has been entirely removed.

31. The sudden extension of the fingers, when they have been long bent, (in consequence, for example, of the contraction of the cicatrised integuments after a burn), is not unfrequently followed by gangrene. The extension should, therefore, be slow and gradual: and we should avoid dividing or excising the bridle, caused by the contracted cicatrix.

32. It is not prudent to divide the frænum for phymosis during the existence of a gonorrhœal discharge, as the wound is then apt to degenerate into a troublesome ulcer.

33. In all diseases of the neck of the uterus, the posterior lip of the os tincæ is more deeply affected than the anterior one.

34. In general, in affections of the brain, the effects of purgatives on the bowels are much less powerful than usual: for example, five or six grains of tartar emetic, and several ounces of Epsom salts, will often not produce either vomiting or purging. In these cases the oleaginous purgatives, as castor oil, croton oil, &c., succeed best.

35. Hiccup, occurring in the course of diseases, is usually only a nervous complaint. Shivering is a much more dangerous symptom; it generally indicates the development of some internal mischief.

36. Patients, suffering from extensive and severe burns, have almost always a very constipated state of bowels. We should not be too anxious to remove this state, as it does not seem to give rise to any inconvenience; and, when strong purgatives are used, a most troublesome diarrhœa often ensues.

37. In the majority of cases of fatal burns, the internal surface of the stomach and of the intestinal canal is found to be highly injected. In the treatment, therefore, of severe injuries of this sort, the surgeon's attention should be directed to the condition of these parts.

38. Very severe burns often induce fatal tetanic symptoms.

39. Enemata, with laudanum, are the best means that we can employ to relieve the accidental and transitory delirium, which often accompanies surgical diseases.

40. When a cataract forms in youth, it is almost always in

the membrane of the lens; whereas in old age, it is the substance of the lens itself that becomes opaque.—*Journal des Connoisances Medico-Chirurgicales.—Medico-Chirurgical Review, April* 1841, *p.* 514.

75.—ON THE RADICAL CURE OF HERNIÆ.

For several years past the attention of surgeons has been directed to discover a safe and effectual method of obtaining a radical cure of reducible herniæ. It is almost unnecessary to state that all the proposals to effect this most desirable object by the mere external application of astringents and such like remedies have proved on trial quite nugatory, and that one or two of the operations which have been suggested are not without considerable danger.

A distinguished surgeon of Paris, M. Belmas, devised a plan to obliterate the herniary sac without leaving any wound in the integuments. He proposed to introduce, by means of a canula in form of a trocar, a small portion of gold-beater's skin into the serous tunic of the hernia, which was to be left there so as to excite an exudation of plastic lymph, and thus cause the *trajet* of the hernia to be firmly plugged up. Although a few cures have been effected by this mode procedure, M. Belmas has more recently substituted for the gold-beater's skin, which he used in his first experiments, minute filaments of animal matter, which he inserts and deposits in the root of the herniary sac by means of a small larding-pin (lardoire).

Mr. Jameson, an American surgeon, has reported a case in which he effected a cure in the following manner. The herniary envelopes being divided, as in the operation for strangulated bowel, he cut a portion of the integuments in the form of the blade of a lancet, and folded it back upon itself, securing it in the ring so as to plug up its *trajet*. We are not aware that this plan has ever been tried in France; it may indeed succeed, but it cannot be altogether free from danger.

M. Gerdy has proposed another method, which is certainly more safe, but is unfortunately much more uncertain. It consists in pushing up along the inguinal canal a fold of the integuments of the scrotum, in the form of the finger of a glove, and then securing this fold in its new situation by

transfixing it with a strong thread by means of a needle contrived for the purpose. This operation has now been performed a good many times; but not only has it failed in several instances, but it has even been followed by fatal consequences in more than one case.

As to the proposal of M. Bonnet, of Lyons, to transfix the sac with several needles to be left in for some days, and that of M. Mayor to substitute strong threads, like a seton, in place of the needles, M. Velpeau is of opinion, that in neither of these ways can we hope to effect more than a partial closure of the sac, and therefore that we cannot count upon a radical cure of the hernia.

In 1836, M. Velpeau tried the effect of iodine injections into the sac of a reducible hernia, and repeated the experiment on other two patients; but the difficulty of reaching the sac with certainty, and the unsatisfactory results obtained in these three cases, are serious objections to the practice; and M. Velpeau himself, in the last edition (1839) of his work, alludes to it without approbation.

During the course of last year, he tried another method in two cases. This consisted of three acts or elements: a subcutaneous *incision* on the principles so ably insisted upon by M. Guerin in the surgical treatment of so many diseases, *scarification* of the interior of the sac, and especially of its internal aperture, and lastly, *compression* of the entire length of the inguinal canal. The left fore-finger being first pushed into the external inguinal aperture to the depth of half an inch or so, a bistoury is slided along the nail and inserted through the integuments in a direction backwards and outwards; the finger is then withdrawn, and the cutting edge of the instrument turned against the iliac parietes of the abdomen, and in such a manner as to make numerous scarifications in various directions, without endangering the epigastric artery: the bistoury is then withdrawn by the small entrance-wound, and the operation is completed.

In two cases M. Velpeau has succeeded in effecting what he has reason to believe will prove a radical cure of the hernia by adopting this practice; but further experience alone can determine whether it will be generally useful.—*Bulletin des Therapeutique.—Medico-Chirurg. Review, April* 1841, *p* 523.

MIDWIFERY.

76.—ON THE USE OF THE PERFORATOR AND CROTCHET.

By Dr. Fleetwood Churchill, Lecturer on Midwifery and Physician to the Western Lying-in-Hospital.

[We extract the following truly valuable remarks from the 'Researches in Operative Midwifery,' now being published in the 'Dublin Journal of Medical Science.' They form a series of aphorisms which will always be found useful to be known at the bedside.]

It may be asked, when the responsibility is so serious, what evidence will be sufficient to satisfy a conscientious practitioner that he may not be committing a crime in his anxious endeavour to afford relief? To this it may be answered:

1. That the continuance of strong labour pains for a certain time, without any advance of the head of the child, is so far evidence of a fixed obstacle to the passage of the child.

2. The failure of a cautious attempt to introduce the forceps will, to a certain extent, demonstrate the amount of the disproportion between the head and the pelvis; and the failure of a careful, yet firm attempt at extraction by the forceps, (when the application has been effected) will prove that the disproportion cannot be remedied by compression.

3. A well-educated finger will enable us in most cases to ascertain whether the diameters of the pelvis are such as will allow of the passage of a living child. And even though this mode be uncertain, we have a means of correcting our estimate, by comparison of the child's head, in apposition with the pelvis. If the natural efforts after several hours, or the forceps with a safe amount of compression and force, cannot bring the widest part of the head of the child through the narrow part of the pelvis, we may fairly conclude that the only resource is craniotomy.

4. The general condition of the mother will also aid our decision. If she be much exhausted, if fever be present, the uterus powerless, the life of the child doubtful, and the success of the forceps dubious, we may shrink from inflicting the

double shock of an unsuccessful application of the forceps, and subsequent delivery by the crotchet. But these cases are very rare, and they only happen when the patient has been mismanaged, and it requires experience and judgment to decide upon the propriety of terminating them by embryotomy.

The *cases* in which the operation is demanded are:

1. When the child is dead, and the labour tedious. But we must be quite sure that the child *be* dead, before this is made the ground of interference.

2. In distortion of the pelvis, when the antero-posterior diameter of the brim is less than three inches, we have no chance of delivery by the natural efforts, or by the forceps; so that to save the mother, we must destroy the child.

3. When the transverse diameter of the lower outlet is diminished to the same extent by the approximation of the tubera ischii, if the forceps, applied antero-posteriorly, are insufficient to move the head, we must have recourse to craniotomy.

4. When the calibre of the pelvis is diminished to a certain degree by a fixed obstacle—as, for example, a fibrous tumour, or an exostosis growing from the bone or periosteum, it may not be possible for the natural efforts alone, or aided by the forceps, to expel the child. In such a case it will be necessary to lessen the head, and apply the crotchet.

In these three latter classes of cases, the passage through the pelvis may be so much diminished as to render it necessary to break up the skull, or to eviscerate the child.

5. In some cases of ovarian disease, where the tumour has formed adhesions within the pelvis, so as to prevent its being pushed above the brim, it has been found necessary to lessen the head before the child could be extracted. We are not, however, to decide upon this measure until the natural powers have had a fair trial, as it sometimes happens, that in the progress of labour, the tumour is so much displaced as to allow of the passage of the child. Further, it will be worth while, before sacrificing the infant, to ascertain whether the contents of the tumour may not be drawn off, by passing a long trocar into it. If a small quantity of fluid escape, it may allow of the application of the forceps, and so enable us to save the child. If, however, the tumour prove to be solid and immoveable, we must, as a "*dernier resort*," have recourse to the perforator and crotchet.

6. When the child is hydrocephalic to such an extent as to prevent its entering or passing through the pelvis, whether distorted or of the natural size, there can be no question as to the propriety of opening the head.

7. In some cases of convulsions, rupture of the uterus, &c., where immediate delivery is necessary, *and where the forceps cannot be applied*, craniotomy must be performed.

8. If an arm descend along with the head, the diameters of which correspond closely to those of the pelvis, (whether the latter be of the usual size or not), it may be necessary to terminate the labour by opening the head.

9. I have already alluded to a class of cases, where, from mismanagement, the patient has been allowed to continue too long without help, and in consequence is greatly exhausted, with fever, quick pulse, delirium, &c. In such cases, the patient will die if she be not assisted; and from the unfavourable state in which she is, she cannot bear a prolonged or very painful operation. Now, if there be sufficient space for the forceps, they ought to be preferred, and it would be very wrong to use the perforator; but if this be doubtful, and the probabilities against our succeeding with that instrument, then the consideration of the patient's inability to bear a severe operation may, in some cases, decide us in favour of embryotomy. These cases, however, are but few, and they must be well marked, to justify our adopting at once such extreme measures.

10. In footling or breech cases, when the head (separated or not from the body) cannot be extracted, we must evacuate its contents.

The next question to be decided, is the *period of labour* at which the operation should be performed.

1. In all cases where the diminution of the pelvic diameters is so great as to render it impossible that a living child could be born naturally or extracted, there can be no hesitation in recommending that the head should be opened at an early period of the labour, say as soon as the os uteri is dilated, or fully dilatable. By this means we shall afford a chance of the completion of the labour by the natural powers, as there can be no objection to waiting a few hours before extracting the child.

2. When the distortion is less, we cannot be sure as to the result of the natural efforts, and we must wait until it is evi-

dent that they are inadequate; then an endeavour should be made to use the forceps, and if this fail, there should be no delay in the performance of embryotomy.

3. These observations will apply equally to the case of morbid growths, ovarian disease, &c., obstructing the passages.

4. In cases of convulsions, ruptured uterus, &c., the time for the operation is determined by circumstances connected with those accidents, and which will be found laid down in works on the subject.

5. In the mismanaged cases to which I have alluded, the condition of the women, which determines the necessity for the operation, will also point out the importance of promptitude. If the case be so bad that we dare not risk a failure with the forceps, it is clear that we cannot afford to delay embryotomy.

After the head is extracted, the body generally follows without much difficulty; but should this not be the case, we must have recourse to evisceration. The scissors must be plunged into the chest, and the contents broken up; the crotchet hooked upon the ribs, and traction exerted. The contents of the abdominal cavity may be evacuated in a similar way, and after this we shall generally be able to extricate the child.—*Dublin Journal of Med. Science, Jan.* 1841, *p.* 429.

77.—*Treatment of Procidentia Uteri by Suture of the External Labia.* By Prof. E. Geddings.—Dr. Fricke, of Hamburg, appears to have been the first who endeavoured to unite the external labia for the purpose of retaining the prolapsed uterus in its situation. This operation, to which the name of Episioraphy has been given, appears to be preferable to several of those which have of late been suggested and employed for the relief of that malady. Should this operation fail, it may be repeated, and it possesses this most important advantage, that it can be performed at any period of life, as it does not interfere with menstruation, conception, or child-bearing.

Professor Geddings has operated successfully in four cases; and the following is the manner in which the operation was performed. The patient was placed in the ordinary position for lithotomy, and the prolapsus reduced. One labium was then put on the stretch by an assistant, and an incision was commenced, with a common scalpel, about a finger's breadth

from the upper commissure, and the same distance from the edge of the labium. The incision was carried downwards with a bold sweep, and terminated by a slight curve inwards, and at a little distance behind the fourchette. A slip of the labium of a finger's breadth in thickness was thus severed from the external parts, taking care not to cut through the mucous membrane of the vagina. Making traction on this slip, downwards and inwards, the mucous membrane of the lateral portion of the vagina was then dissected up to the extent of an inch and a half, and detached with the excised labium. The same thing was repeated on the opposite side, the incision being so directed as to intersect the first cut at an acute angle, and remove the fourchette with the other parts. After the hemorrhage, which was generally inconsiderable, had ceased, an oiled sponge was passed into the vagina, and the two raw surfaces brought into apposition by means of the quilled suture of five stitches. The parts were dressed with a compress of soft lint, secured by a T bandage, and the patient put to bed, with her ankles and knees properly secured together by means of bandages. It was not found necessary to use the catheter, but considerable advantage was derived from keeping the dressings constantly wet with cold water. The introduction of the sponge is for the purpose of preventing the descent of the uterus till adhesion had taken place, and was generally removed about the fifth or sixth day. The sutures were removed in proportion as the parts appeared to be united.

In the four cases operated on by Professor Geddings, no return of the complaint had occurred at the period of the publication of this paper, and they had all returned to their usual avocatians.—*American Journal of Med. Science, and Edinburgh Med. and Surg. Journal, Jan.* 1841, *p.* 266.

78.—*Mode of Inducing Premature Labour.* By Dr. Meissner, of Leipsic.—Dr. Meissner never induced premature labour till the thirty-sixth week of pregnancy, and in all the cases the antero-posterior diameter varied from two inches and three quarters to three inches one line. His mode of operating, which is a modification of that by puncture of the membranes, was the following:—A very slender canula is provided of about thirteen or fourteen inches in length, and bent

regularly in the form of a segment of a circle. It has a ring soldered on the convex side of its lower extremity, in order to give a more secure hold, and allow of the point of the instrument being accurately guided. This canula is provided with two trocars, one with a blunt point, and the other with a sharp-cutting point. When the instrument is to be used, the blunt-pointed trocar is introduced to the canula, and projects beyond its orifice so far as to prevent the edge of the tube injuring the parts. The patient then stands before the practitioner, who kneels before her, the usual manner in which vaginal examinations are made on the continent, or she may sit on the very edge of a chair or of the bed. The fore-finger of the left hand is then introduced into the vagina, and the canula guided along it to the orifice of the uterus, making the convexity of the instrument correspond to the curve of the sacrum. The point of the instrument is then pushed slowly backwards and upwards, so as to make its rounded point slide between the uterus and the back of the membranes. When the point is once past the neck of the uterus, it advances easily, care only must be taken to detach the membranes as little as possible. When the point of the instrument is about ten or eleven inches within the *os uteri*, the blunt-pointed trocar is withdrawn, and the handle of the instrument is pressed against the perinæum, to detect, if possible, against what the point of the canula is pressing. If it be felt to be a hard body, the point is made to move to one side or other till an elastic fluctuating spot be reached, which shows it is opposite the membranes alone; the sharp-pointed trocar is then introduced, and perforation of the membranes is made. The trocar is then withdrawn, and about a table-spoonful of the *liquor amnii* is allowed to escape; after this the canula also is removed, and the woman is allowed to walk, sit, or lie down at her own pleasure. The amniotic waters after this, slowly, and drop by drop, escape, and appear to prepare the parts for delivery, so that after twenty-four hours the hand may easily be introduced into the vagina. Labour-pains usually come on from twenty-four to forty-eight hours after the puncture of the membranes; in several of the cases, delivery was completed thirty-six hours after the puncture.—**Edinburgh Med. and Surg. Journal, April* 1841, *p.* 557.

* See also Medico-Chirurgical Review, April 1841, p. 525.

79.—*Nux Vomica in the Vomiting of Pregnant Women.* By Dr. Kroyher.—Dr. Kroyher, of Presburgh, assures us that minute doses of the nux vomica, given in some aromatic or in cherry-laurel water, are a *specific* remedy against the troublesome vomiting to which many women are subject during the early months of pregnancy. In order to insure success, the bowels must be kept in a gently open condition, but neither purged nor constipated. The author says, that the effects of this remedy are certain, provided the vomiting is the result of pregnancy alone, and is not dependent on any morbid state, either of the stomach or of any other organ. The dose recommended is from two to four drops of the tincture—the strength of this is not stated—to be gradually increased to ten, twelve, or eighteen drops every morning in bed, and again in the evening. In many cases it proves quite successful within a week or even a shorter time; in other cases its use must be continued longer.—*Medico-Chirurgical Review, Jan.* 1841, *p.* 231.

80.—ON SANGUINEOUS TUMOURS OF THE SCALP IN NEW-BORN CHILDREN.

By Dr. Francis Black.

Sanguineous tumours may be classed under three different heads; first, those in which the blood is effused under the integuments exterior to the pericranium; the second, that which is found between the pericranium and the bone; and the third species situated deeper than either of the preceding two, between the *dura mater* and bone. These tumours are not confined to the head, but are sometimes met with on the face, breech, and shoulders, or on any other region which has suffered pressure in the pelvis during labour. But the head is their principal seat. We generally find them on the right parietal bone, seldom more than one, but in some instances two or three, either isolated or communicating with each other. The fluid which these tumours contain possesses more or less of the characters of blood; sometimes coagulated, in other cases fluid, and of a florid or venous colour, and occasionally so thin that it seems to be simply the serum of the blood mixed with the colouring matter. In cases of long

standing, there has been found an admixture of purulent matter.

The first class may be divided into two varieties; first, where the effusion is supra-aponeurotic; second, where it is sub-aponeurotic.

Supra-aponeurotic.—It differs from the other varieties in this respect, that it is not confined to one part of the cranium; that it very soon disappears; and is generally the consequence of pressure during delivery.

Sub-aponeurotic.—The second variety, where the extravasation is between the aponeurosis of the *occipito-frontalis* and the pericranium, differs in many points from the last mentioned.

The treatment here ought to be a little more active than in the first variety: but the blood is generally absorbed of itself. If, however, after eight or ten days, we see no diminution, lotions of muriate of ammonia, made more or less stimulating by alcohol, should be applied. This may be combined with pressure. Before using these we may puncture with a cataract needle, so as to draw off the contents.

What we dread in an obstinate case, is that suppuration may be induced, or that from the continued irritation of the contents, the pericranium be separated from the bone. It is remarkable that these tumours cause so little uneasiness.

Second Class. Cephalæmatoma.—Almost each author who has turned his attention to this tumour has employed a new name. Thus it has been styled *Ecchymoma capitis* by Feller and Carus; Plenck added the additional epithet of *cariosum;* Golis calls it *Thrombus neonatorum;* and Palletta *Abscessus sanguineus capitis.* I shall employ the term Cephalæmatoma, introduced by Zeller, and now in general use.

In this species the blood is extravasated between the bone and the pericranium. Formerly authors were not aware of the seat of it, hence the contradictory statements which they gave; some stating that it was always fatal, others that it was of little consequence and soon disappeared.

This variety is peculiarly distinguished by having a particular hard edge or ring round its base; it is much more prominent and more circumscribed than those mentioned before; and the skin is not discoloured.

Causes.—Pressure on the child's head during its passage

through the pelvis has been generally assigned as the cause of all these tumours. But though this is the fact in the case of the subcutaneous or *caput succedaneum*, it cannot, from many circumstances, I think, ever be the cause of the true cephalæmatome.

Various theories have been brought forward, such as an abnormal condition of the blood-vessels, ulceration, *nævus maternus*, &c.; but as these are not supported by facts, we need not dwell on them. The most plausible yet proposed is that suggested by Dubois, and confirmed by Valleix. In order to follow fully their reasoning, it will be necessary for a moment to advert to the anatomy of the parietal bone.

The ossification of the parietal bone commences from one point in its centre, from which bony radii are seen shooting in all directions. At birth, all the portion beneath the parietal prominence is found completely ossified, and showing no radiated appearance; but above the prominence we find that ossification is not complete, and that the radiated appearance is most distinct. On examining the external surface of the dried bone, there are seen a number of fissures between the radii; a few of which immediately above the prominence are also open on the internal surface. In the fresh state, this bone is exceedingly vascular, and on removing the pericranium, which is done with great facility, in proportion as the bone is vascular, we see an immense number of minute vessels running in these fissures. On applying pressure round the circumference of the bone, the radii are removed one from the other, and the vessels are torn, the consequence of which is ecchymosis.

Valleix's theory, then, is, that the pressure of the child's head against the mouth of the uterus causes *cephalæmatoma*. This is strengthened by the fact of its not appearing in the case of twins, when the mouth would be dilated on the passage of the second child.

This theory is, to all appearance, the one which bears the semblance of truth, and is therefore worthy of our belief, at least, until another more plausible can be given.

There are two different opinions with regard to the manner in which they terminate favourably. These depend upon the fact, whether the bone or periosteum secretes osseous matter.

The following are the views of Naegale with regard to the manner of cure:—First, the detached pericranium ossifies on its interior surface. Secondly, in proportion as the extravasated blood is absorbed, the ossified pericranium approaches the bone, and finally unites perfectly with it, Thirdly, after six months. or even a year, an eminence is remarked on the spot where the tumour was seated. Fourthly, in children who have died at the end of six months. or one year, M. Naegele has found by dissection that the parietal bone was much thicker at the seat of the tumour than at any other point of its extent.

Valleix gives a different view. He says, "I have seen two cephalæmatomata terminate without operation, and the following are the results:—They existed on the same infant, and, though very small, the osseous circle was very considerable. Every day this circle made new progress from the centre to the circumference, so that daily the fluctuating part of the tumour diminished. At last, only a small excavated point, containing fluid, was to be felt at the top of the osseous protuberance; but this point never offered either the hardness or the crackling noise of parchment mentioned by some authors." In a word, the ossification extended from the sides to the middle, and from below upwards, that is to say, it took its origin from the bone.

Which of these statements are correct? I would say both are equally so.

It is quite clear, from numerous experiments, that the periosteum does throw out osseous matter.

It being seen that the pericranium does throw out ossific matter, and finding by dissections that the bone forming the base of these tumours is also covered by rough bony granulations, we must conclude that the ossific matter is secreted both by the pericranium and by the bone; that these unite and form the callus, which remains often for six months, or even a year, after the fluid contents have been absorbed.

Treatment.—Discutient applications, combined with slight pressure, are decidedly the best applications, especially if the tumour is small; but whenever it threatens to inflame, it ought to be opened without delay. The incision should be small, and kept open for a day or two by the introduction of a small piece of lint. Zeller gives three cases, showing

the comparative efficacy of discutient applications with incisions. A female child, which was born with ease, had on both parietal bones a sanguineous tumour, almost equal in size. That on the left was opened, and at the end of eight days was cured. The other disappeared in five weeks, under the use of discutient lotions. In another case of a male child, where the tumour was larger, and covered the superior and anterior quarter of the right parietal, it disappeared after incision in less time than the former case, and in a still shorter period in a third case. Incision, or rather puncture, may be employed in cases where the tumour is very large, and where the parents of the child become anxious for its disappearance.

Third Class. Subcranial.—In this variety, the blood is extravasated between the *dura mater* and the cranium; an accident which Velpeau says is by no means uncommon during delivery. This, which by some is called internal cephalæmatoma, is not confined to the parietal bone, but is met most frequently in the occipital region. Baron states that, in the few cases which he has met with of internal cephalæmatoma, he has always found an external one. In the first stage of this tumour, there is sometimes constitutional symptoms, such as twitchings of the limbs, stupor, &c.; but more often the disease proceeds insidiously, either producing inflammation of the membranes, or destruction of the bones, and only then is constitutional disturbance produced. Hence, when there is no external appearances, the diagnosis is almost impossible.

Treatment.—I can say little on the treatment of this variety, as I have been unable to procure any cases in which remedial measures have been used. But, considering the severity of the lesion, and the delicate age of the patient, we cannot expect that art can be of any avail, either in evacuating or causing absorption of the contents.—*Edinburgh Medical and Surgical Journal, Jan.*, 1841, *p.* 112-125.

ANATOMY, PHYSIOLOGY, AND PATHOLOGY.

81.—ON THE ANATOMICAL RELATIONS OF THE BLOOD-VESSELS OF THE MOTHER TO THOSE OF THE FŒTUS.

By Dr. John Reid.

[In Retrospect, Vol. II., Art. 136, will be found an abstract of an interesting paper, by Dr. Knox, on this subject. We believe it was the preparation here referred to by Dr. Reid, which first induced Dr. Knox to communicate his paper to the Medical Gazette in Oct. last, and that in fact the priority of the discovery belongs to Dr. Reid. It seems that Flourens is the only modern author of note who insists on a direct communication between the vessels of the mother and the fœtus. The Monros, the Hunters, and Wrisberg, satisfactorily proved the error of this opinion, and proved that there is no vascular continuity between the vessels of the mother and placenta. The Hunters shewed "That numerous small curling arteries, the largest being about the size of a crow-quill, passed from the inner surface of the uterus, that they penetrated the decidua and opened into the interstices between the fœtal blood-vessels of the placenta."]

It was therefore concluded, that the blood of the mother was poured by curling arteries into a kind of cellular tissue, filling up the intervals between the ramifications of the fœtal placental vessels, from which it returns to the uterine sinuses of the mother through their placental prolongations, after having acted upon the blood of the fœtus through the thin walls of the umbilical placental vessels.

[Although this view has been strenuously opposed by several eminent men, as Lauth, Lee, Velpeau, Radford, Ramsbottom, &c., it has been supported and confirmed by the late observations of Weber, published in Hildebrandts Handbuch der Anatomie des Menchen, 1832, and by Dr. Hugh Ley, Mr. Owen, &c. Dr. John Reid proceeds as follows to give an account of his interesting observations on the impregnated uterus, which he had the opportunity of examining.]

On separating the adhering surfaces of the uterus slowly and cautiously under water, I satisfied myself, but not without

considerable difficulty, of the existence of the utero-placental vessels described by the Hunters. After a portion of the placenta had been detached in this manner, my attention was attracted towards a number of rounded bands passing between the uterine surface of the placenta, and the inner surface of the uterus. These bands were generally observed to become elongated, thinner, and of a cellular appearance when put upon the stretch, and were easily torn across; while at other times, though much more rarely, they could be drawn out in the form of tufts from the mouths of the uterine sinuses. On slitting up some of the uterine sinuses with the scissors, these tufts could be seen ramifying in their interior, and were more or less elongated; many of them appearing only to dip into the open mouths of the sinuses, while others proceeded from a quarter of an inch to an inch from the open mouths of the sinuses by which they had entered, and in some cases they extended themselves into one of the neighbouring sinuses. The next point was to endeavour to ascertain the nature of these tufts by injection and microscopic examination. A size injection was thrown into the umbilical vein, and though it ran imperfectly from the injury done to the detached portions of the placenta while tracing the course of the utero-placental vessels, yet several branches of the tufts contained in the uterine sinuses were filled with injection, and their continuity with the umbilical placental vessels was clearly ascertained. On placing portions of these tufts under the microscope, along with portions of the umbilical vessels taken from different parts in the interior of the placenta, their identity was at once apparent. Having thus determined that these tufts observed in the uterine sinuses of the mother were prolongations of the fœtal placental vessels, I then proceeded to examine their anatomical relations to the sinuses. These tufts were found to protrude into the open mouths of certain of the uterine sinuses only, and it need scarcely be added that they were observed only in those sinuses placed next the inner surface of the uterus, and not in any of the deeper sinuses. These tufs were surrounded externally by a soft tube similar to the soft wall of the utero-placental vessels, which passed between the margin of the open mouths of the uterine sinuses, and the edges of the orifices in the decidua through which the tufts protruded themselves into the sinuses. The size of these tufts varied

considerably. Some of them appearing to fill up completely the open mouths of the sinuses by which they entered; while others filled them only partially. On examining these tufts as they lay in the sinuses, it was evident, that, though they were so far loose and could be floated about, yet they were bound down firmly at various points by reflections of the inner coat of the venous system of the mother upon their outer surface. This reflection of the inner coat of the uterine sinuses upon the tufts was sometimes observed at the point where these entered the open mouths of the sinuses, at other times it was at or near their apices, and was in general so strong that the tufts were torn across in attempting to detach them by pulling. In this uterus we thus ascertained that while some of the utero-placental veins contained no prolongations of the fœtal placental vessels, in others, these passed along their interior and projected into the uterine sinuses. On tracing those utero-placental veins, which contained no fœtal vessels, as far as the placental surface of the decidua, the inner coat of the venous system was seen to be prolonged upon some of the tufts of fœtal-placental vessels in their immediate neighbourhood. On tracing one of the larger of the curling arteries through the decidua, it was also observed, that when it reached the placental surface of that membrane, the interior coat of the arterial system of the mother was prolonged upon some of the tufts of the fœtal placental vessels, which projected into their orifices. Those numerous branches of the fœtal placental vessels, which reach the placental surface of the decidua and do not pass into the uterine sinuses, nor into the orifices of the utero-placental vessels, are attached by their apices to the placental surface of that membrane.

On placing some of the filaments composing those tufts of fœtal placental vessels found in some of the uterine sinuses of the mother under the microscope, they were observed to divide and subdivide into branches more or less elongated, all of which terminated in blunt extremities.

There is no cellular nor any other tissue filling up the intervals left between the branches of the fœtal placental vessels; and the difficulty experienced in unravelling them does not arise from the presence of any connecting medium, but from the crossing and recrossing of the branches of different tufts, and those of the same tuft with each other. The outer

surface of the placental vessels has a smooth appearance, and they are, *we may suppose*, everywhere enveloped in the inner coat of the vascular system of the mother, which, as we have seen above, is reflected upon them.

As the blood-vessels forming the placenta, and also those prolonged from it into the uterine sinuses, divide and subdivide into numerous branches, which do not anastomose with each other, but all terminate in blunt extremities, we might, on theoretical grounds, as well as from the descriptions given by others, decide that in each of these branches an artery and a vein are bound up together. This conclusion was fully confirmed by the microscopic examination of some of the injected branches of the tufts of the placenta which passed into the uterine sinuses, and also of three other placentæ, in which the arteries were filled with differently coloured size injection. I was satisfied that each of the smaller branches of the placental arteries is bound up with another branch of one of the placental veins, which closely accompanies it, forming what appears a single vessel when viewed through the microscope. Each branch of the umbilical artery is thus closely bound up with a branch of the umbilical veins, and both of them divide and subdivide exactly in the same manner, and terminate in what appears to be blunt entremities, but which actually form the termination of the arteries, and the commencement of the veins. The interior of the placenta is thus composed of numerous trunks and branches, each including an artery and an accompanying vein), every one of which, we believe, is closely ensheathed in prolongations of the inner coat of the vascular system of the mother, *or at least in a membrane continuous with it.* If we adopt this view of the structure of the placenta, the inner coat of the vascular system of the mother is prolonged over each individual tuft, so that when the blood of the mother flows into the placenta through the curling arteries of the uterus, it passes into a large sac formed by the inner coat of the vascular system of the mother, which is intersected in many thousands of different directions, by the placental tufts projecting into it like fringes, and pushing its thin wall before them in the form of sheaths, which closely envelope both the trunk and each individual branch composing these tufts. From this sac, the maternal blood is returned by the utero-placental veins without having been

extravasated, or without having left her own system of vessels. Into this sac in the placenta containing the blood of the mother, the tufts of the placenta hang like the branchial vessels of certain aquatic animals, to which they have a marked analogy. This sac is protected and strengthened on the fœtal surface of the placenta by the chorion; on the uterine surface of the *decidua vera*, and on the edges or margin of the *decidua reflexa*. The blood of the mother contained in this placental sac, and the blood of the fœtus contained in the umbilical vessels, can readily act and react upon each other through the spongy and cellular walls of the placental vessels, and the thin sac ensheathing them, in the same manner as the blood in the branchial vessels of aquatic animals is acted upon by the water in which they float. According to this view of the structure of the placenta, the fœtal and maternal portions of the placenta are everywhere intimately intermixed, and we find tufts of minute placental vessels with their blunt terminations, lying immediately under the chorion covering its fœtal surface, as well as towards its uterine surface. When the fissures dividing the placenta into lobes are so deep as to intersect the whole thickness of the placenta, we may have two or more of these sacs instead of one. The discovery of the prolongations of the fœtal placental vessels into some of the uterine sinuses is principally valuable, as it presents us with a kind of miniature representation of the whole structure of the placenta, and enables us to comprehend it readily, for we have there the fœtal blood vessels, resembling branchial vessels, ensheathed in the inner coat of the vascular system of the mother, and bathed in the maternal blood. The placenta is therefore not analogous in its structure to the lungs, but to the branchial apparatus of certain aquatic animals.—*Edinburgh Med. and Surg. Journal, Jan.* 1841, *p.* 1–12.

82.—ON SCROFULOUS TUBERCLE OF THE BRAIN.

By Dr. Hennis Green, Lecturer on the Diseases of Children, at the Hunterian School of Medicine, &c.

[The existence of this disease has been greatly neglected by medical practitioners, and we owe much to Dr. Green for pointing it out to us so clearly in his journal. He says that he has examined every medical work on the subject, and is

"not acquainted with one in which cerebral tubercle is mentioned." His first case is related as follows:—]

Alexander Legros, three and a half years of age, was admitted into the Children's Hospital on the 1st July, 1835, whither he was brought by the nurse, under whose care he has been since the age of three months. The mother of the child is consumptive. For the last month he complained of pain in the abdomen, for which a medical man ordered baths and twelve leeches to the abdomen; he took some medicine (supposed to be vermifuge) and vomited it up; on the following morning he had some convulsive attacks (the first lasted ten minutes), during which the face was very pale, the eyes fixed, and the arms contorted; he vomited again, without having taken medicine, in a few days, and the vomiting has recurred since then several times. The child was frequently stupid; no delirium or pain in the head; no squinting observed; no diarrhœa. For the last eight days the boy has had pain in the back of the head, and since then squinted; he also evinced an unwillingness to move about; makes urine frequently. He remained in the hospital until the 10th, with no symptom worthy of notice, except squinting and a slight movement of the lower jaw, and was removed by his friends.

On the 16th July he was again brought to the hospital, with a slight eruption of small-pox, in the first stage. We now learn that on the 14th and 15th the child vomited (he also vomited this morning), and complained very much whenever the limbs were touched; he had a strong convulsion this morning, and several similar attacks since Wednesday last.

Present state.—The boy now lies quietly on his back; the face full, pale, and cool, but the forehead excessively hot; general surface moderately warm: there is some convulsive strabismus of the right eye, the eyelid of which is more closed than the left one; tongue clean and moist; the lateral movements of the lower jaw are more marked than they were before, and he occasionally catches the bed-clothes between his fingers; answers clearly when spoken to; extremities neither stiff nor contracted; when the integuments of the hands or arms are touched, he evinces the most acute sensibility; no pain in the abdomen; pulse small, 128; respiration free, at one time 28, at another 36; short, dry cough.

17. The general appearance is the same as yesterday; had

no regular convulsive fit, but much agitation and delirium last night; the squinting and movement of the jaw continue, with jactitation of the hands; right eye nearly closed; pulse small, 130; respiration 34; skin very warm; abdomen contracted, and free from pain; tongue red and covered with a number of white pips, like aborted pustules; the face and extremities are covered with small papulæ, most of which are flat and irregular, like those of measles; a few only are prominent.

Evening.—Pulse 144; no motion of lips or jaw; thirst; deglutition perfect; some areola round the pustules on the body; on the thighs they are very confluent; the child has been seized with a peculiar trembling of the upper extremities.

19. Child appears to be dying. He lies on his back, with both hands elevated to the ears, and trembling violently; face pale, covered with a number of flat and pale papulæ; no convulsive motion of muscles of the eyes or face; pupils natural; skin of forehead still excessively warm; pulse small and rapid, 140; respiration 46; lips and tongue dry and dirty; low muttering delirium; the pustules on body are assuming a blueish aspect. Died in the evening at eight o'clock.

Body examined fifteen hours after death.—Head; The superior surface of the brain is pale, and the membranes not injected; on the left hemisphere, along the course of a large vein, there is a sero-sanguineous effusion, about two inches in length; in the right hemisphere, about two and a half inches from the frontal bone, and a quarter of an inch from the median line, there is a large solid tubercle embedded between the convolutions, with two or three small tubercles in the adjoining pia mater. The membranes and surrounding nervous substance are not altered; on the side of the left hemisphere, near the falx, there is a flat mass of tubercular matter, a quarter of an inch in diameter, partially imbedded in the substance of the brain; the pia mater lying over it is not injected, but it is surrounded by a deep red circle of injection, about two lines in breadth, with slight softening of the nervous tissue.

The lateral ventricles are considerably dilated, and contain five ounces of clear serum; inferior surface of brain healthy. On attempting to remove the cerebellum, a large portion of the right lobe was found to be closely adherent to the dura mater; here there existed a large flattened tubercle, one and

a half inches by half an inch, adhering by one surface to the dura mater, and by the other embedded in the nervous tissue; the latter being softened around it, and of a light yellowish colour, sprinkled with points of red. The rest of the nervous system healthy.

Chest; The left lung adheres along its whole surface to the chest, pericardium, and diaphragm, by cellular tissue of a deep red colour, and moderate consistence; cavity of pleura contains about half an ounce of clear serum; numerous tubercles in both lungs; one very large one in the bronchial glands. Œsophagus healthy. The membrane lining the upper part of the larynx is of a dark purple colour, and is covered with small round white spots, apparently false membrane.

Abdomen; Extensive tubercular deposits in the mesenteric glands; in the centre of the right kidney a small crude tubercle, of the size of a marble, without any change of the surrounding tissues.

[In the second case related, the morbid appearances after death were as follows:]

The membranes on the upper surface of the brain are free from inflammation, but there is a slight infiltration of serum in the pia mater. The cerebral substance healthy, although rather soft; about a spoonful of clear serum in the lateral ventricles; the parietes of the ventricles not softened, but the fornix seems to be a little less firm than in the healthy state. In the centre of the pons Varolii, extending to the left side, there is a round crude tubercle nearly as large as a walnut; the surface of this tubercle is irregular, and the surrounding nervous substance is softened to the depth of about a line. There is a second tubercle, of the same size as the former, in the left crus cerebelli; this one is enclosed in an evident cyst; here the surrounding tissue is also soft. There are no marks of chronic inflammation or traces of miliary tubercles in any part of the cerebral membranes.—*Provincial Med. and Surg. Journal, Dec.* 12, 1840, *p.* 182.

83.—*On the Influence of Artificial Light in causing Impairment of Vision.* By Dr. James Hunter, Surgeon to the Eye Dispensary, Edinburgh.—Dr. Hunter explains, with much ingenuity as well as scientific knowledge, a cause of impaired

vision very extensive in operation, and which, from the very general use of gas-light, is likely to become still more so.

Common day-light, which is the only natural light, and the least injurious to the eyes, consists of red, yellow, and blue rays in the ratio of 5, 3, and 8; that is a predominance of blue rays, which form the mildest and least hurtful to the retina. In the ordinary forms of artificial light, as the light from candles, either of tallow or wax, oil or coal gas, this proportion is reversed, the yellow and the red rays being in excess, and the blue rays in the ratio of minority. From this peculiarity in artificial light in the excess of red and yellow rays, various inconveniences and evils result.

1. Colours and coloured objects appear in it differently from what they do by day-light. 2. The retina is unequally, we should say too strongly excited, and becomes less sensible to those rays that are in excess, so that afterwards, when it views a white object by day-light, the blue rays contained in the white light reflected from its surface, make a greater impression than the red or yellow rays, and the objects assume more or less of a dingy blue or purple colour. This over-excitement of the retina produces films, *muscæ volitantes*, and even amaurosis. 3. The red and yellow rays possess considerably higher heating powers than the blue rays, and therefore artificial light, which contains these calorific rays in larger proportion, must be injurious to the retina in this manner. 4. From artificial light furnishing less defining power, it is requisite to use it in considerable quantity; and this is another source of over-excitement to the retina. 5. While, in the case of natural or day-light, the ordinary calorific or heating powers of the red and yellow rays are, by various circumstances and beautiful provisions in its transmission through the atmosphere, almost annihilated, so that these rays arrive at the eye with much less of their heating powers than they would have, if direct, the rays of artificial light, by coming more directly and in a more concentrated form on the eye, are accompanied with their concomitant heat, and thereby injure the retina greatly by this hurtful adjunct. 6. The carbonic acid gas which is extricated from all artificial lights, procured as they are by combustion, though not acting on the eye itself, acts on the brain, and especially the optic nerves, the sensibility of which it weakens and ultimately destroys. 7. All artificial lights are unsteady and irregular, and very often placed in improper positions.

Of all artificial lights, gas light is the most hurtful; not from anything peculiarly noxious in its qualities, but from its cheapness, which leads to its being used in excess, and, consequently, in such quantity as to over-stimulate the eyes.

To obviate these several evils, Dr. Hunter recommends the more sparing use of gas-light, and other artificial lights, and the employment of means calculated either to add blue rays when deficient, or to withdraw the red and yellow rays when in excess.

This object is to be attained by the use of conical reflectors of a bluish or azure colour, and chimneys stained of a blue colour. Pale blue glasses are also recommended; but Dr. Hunter thinks their use is not advisable, as they become hot, and require, from the loss of light they cause, to be often removed.—*Edinb. Med. and Surg. Journal, Jan.* 1841, *p.* 247.

84.—*New Theory of the Souds of Respiration.* By M. Beau. —"The object of the present communication is to support with new facts the theory which I proposed in 1834, (Archives Generales) as to the cause of the respiratory sounds, and to shew the various applications of which it is susceptible, by passing in review all the normal and abnormal sounds produced in the larynx, the bronchi, and the lungs. This theory rested on the following two propositions.

1. There is produced in the superior respiratory passages a sound or murmur which resounds in the pulmonary vesicles, the trachea, the bronchi, the caverns, and which, in consequence of this resonance, is the only cause of the different sounds, known under the names of the *vesicular* the *tracheal*, the *bronchial*, the *cavernous*.

2. Every sound produced in the superior respiratory passages must resound in the bronchial tree with its proper character and its own degree of intensity.

These two propositions were deduced from clinical observations and from several experiments, of which the following are the chief:—

1. When the superior sound is suspended,—and this may easily be done by instinctively dilating the superior respiratory passages,—the vesicular, tracheal, bronchial, and cavernous sounds can no longer be heard. The breathing, although now very tranquil and silent, goes on as usual; but if we did not feel under the ear the thoracic parietes alternately rise and fall, we might suppose that the person did not breathe.

2. If we suspend the superior sound during one only of the respiratory movements, then the vesicular, tracheal, bronchial, and cavernous sounds are found to be suspended during that movement, while it is still audible during the other.

3. If we produce a whistling sound during either respiration or expiration, the same kind of sound is heard in the bronchial tree.—*Medico-Chirurgical Review, Jan.* 1841, *p.* 208.

[Dr. Corrigan, of Dublin, offers a substantial objection to this theory of Beau's, as will be seen by the following extract from one of his clinical lectures.]

The healthy respiratory vesicular respiration is *only* heard during *inspiration*, or the sound during expiration is so very feeble that it may be considered as absent. Whenever a sound is heard, during expiration, of even very moderate degree of loudness, unless at the root of the lung, or very close to the trachea, there is always disease. Had Beau paid attention to this fact, he would not, I think, have originated his theory, that the respiratory murmur heard through the chest is the sound, not of the current of air passing into the air-vesicles, but is merely the propagation of the sound generated by the passage of the air along the nasal passage, pharynx, and trachea. Were his opinion correct, the respiratory murmur should, throughout the chest, present the same character which belongs to it in those passages, of being heard equally loud in inspiration and expiration; but as it differs in the remarkable character of being audible only during inspiration, this difference of character is, I think, a conclusive objection against Beau's theory.—*Med. Gazette, March* 12, 1841, *p.* 906.

85.—ON CORPORA LUTEA.

By Dr. Robert Paterson, Physician to the Leith Dispensary.

[Dr. Paterson has written two interesting papers on this subject, one in the 'Edinburgh Med. and Surg. Journal,' for Jan, 1840, and another in the same Journal for Oct. 1840.]

In the first part, Dr. Paterson discusses the appearances presented by the true corpus luteum in its early stages, its anatomical position, with the time and mode of its disappearance, as well as the different kinds of false corpora lutea. He has shewn that a central cavity does not always exist in the very early corpus luteum, as is generally believed, but that there is often a fibrinous coagulum filling up this cavity, and

that the distinguishing marks of an early corpus luteum are, the presence of the plicated structure of its proper substance, and a central cavity, or fibrinous coagulum. The substance of the corpus luteum is effused between the membranes of the Graafian vesicle; and it appears that Dr. Lee has mistaken an effusion of coagulable lymph in the interior of the cavity of the corpus luteum for the membranes of the Graafian vesicle. The corpus luteum is not always of a yellow colour, but occasionally assumes a pinkish or red tinge, independent of any inflammation or abnormal congestion in the uterine appendages. The precise period of the disappearance of the corpus luteum is not stated, but three or four months after delivery is considered by Dr. Paterson to be the time at which this appearance in the ovary ceases to be observable. As the formation of the corpus luteum consists in an infusion of lymph between the layers of the Graafian vesicle, so does the manner in which it disappears depend upon the reabsorption of this lymph; consequently the appearances in the ovary are different when a central cavity has existed to the last, for instead of a white central cicatrix, a puckered cyst (from the approximation of the two membranes of the Graafian vesicle) is left, and which is very liable to be mistaken for other cysts frequently found in the ovary.

Dr. Paterson has shewn, that false corpora lutea are frequently connected with menstruation, and has given several cases in illustration. He comes to the following conclusions:

"False corpora lutea in the human female, arise,

1st. From the bursting and subsequent filling of a vesicle with blood, as in menstruation.

2nd. From the partial effusion of blood into a vesicle, either with or without rupture of it.

3rd. By reabsorption of the fluid of a morbidly enlarged Graafian vesicle, giving rise to a puckered cyst.

4th. From effusion of blood into the tissue of the ovary—the apoplexy of that organ.

5th. Tubercular deposits.

6th. Cysts filled with yellow fatty matter.

These are to be distinguished from the true corpus luteum by the following marks:—

They in general have an irregular form. They want the central cavity lined with a distinct membrane, or the central puckered cicatrix.

They have no concentric radii.

They are frequently numerous in both ovaries."—(Abridged from *Edinburgh Med. and Surg. Journal, Jan.* 1840.)

Dr. Paterson devotes the second part of his communication to the consideration of the corpus luteum in the more common of the domestic animals.

Dr. Paterson states, "that it was his intention now to have considered the question of the possibility of a true corpus luteum ever occurring without impregnation. But it will be obvious to every one, that it is necessary to resort to experiments on the lower animals, for assistance in the solution of this question, as no single individual, however extended his experience or opportunities, can be expected to accumulate sufficient evidence from the human female alone.

The size of the corpora lutea of the lower animals is greater in comparison to the size of the ovary, than that of the human female; their appearance through the membranes of the ovary is more striking; and they have the nipple-like prominence much better marked.

The true corpus luteum of the cow is of a bright orange yellow colour, and its bisection on an average measures eleven and a half lines in its greatest, and about ten lines in its smallest diameter. In the ewe, the corpus luteum has generally a dull fleshy-red colour, and remains a long time of considerable size in the ovary. Generally one or two are found. In the sow, the corpus luteum has much the same colour as that of the ewe, but is of somewhat larger size. They vary from three to fourteen.

The corpus luteum of the bitch has a pinkish yellow colour, and its size may be compared to that of an ordinary sized pea.

The cat and rabbit are the only other animals, the corpora lutea of which are described. It would appear that the colour of both is very similar, viz., a dingy yellow: but those of the cat are rather the largest.

In describing the origin of false corpora lutea in the lower animals, Dr. Paterson takes an opportunity of reminding us of the great similarity between the season of heat in the lower animals, and menstruation in the human female; and as false corpora lutea have been shown to arise during menstruation in the human female, they are also described to occur during the period of heat in the lower animals.

During the period of menstruation in the human female, and heat in the lower animals, it would appear that similar changes take place in the ovaries, that there are prominent vesicles, that these are ruptured, that their cavities become filled with blood, and that after a time this blood changes its colour and gives rise to the appearance of false corpora lutea. While this is one of the most common origins of the false corpus luteum in the lower animals, another very frequent one is the effusion of blood into the tissue of the ovary, forming the ovarian apoplexy. We have found small coagula of blood at almost every part of the ovary, and under all circumstances, unconnected with heat or conception, and even when the animal has been several months pregnant. These clots of blood soon change their hue, and become either yellow and firm, or melanotic throughout, or yellow and black in the centre. In the cow they not unfrequently assume a brick-red colour, with small dark or black points through them. I have also not unfrequently found cysts filled with a yellow caseous matter. These are occasionally found as large as true corpora lutea, but are easily distinguished by their consistence and structure, as well as by their general appearance. In all instances, too, they can be turned out of their cyst with the greatest ease, which cannot be done with a true corpus luteum.

False corpora lutea in the lower animals have: *first*, an irregular form; *second*, no distinct central cavity lined with a membrane, or a central puckering; *third*, no concentric radii, nor lobular divisions; *fourth*, they can frequently be turned out of a distinct cyst, when the body will be found to be of a caseous consistence and appearance; *fifth*, they have not the same colour as the true corpora lutea.—*Edinburgh Monthly Journal of Med. Science, Jan.* 1841, *p.* 43.

86.—ON VESSELS IN GRANULATIONS.

By Robert Liston, Esq., Surgeon to the North London Hospital, &c.

The admirable papers on Diseases of the Joints, by our distinguished President, and also by Messrs. Mayo and Key, read before this Society, and published in their transactions, leave, it may well be supposed, very little further to be said on the subject.

Having, however, succeeded in injecting minutely, some limbs removed on account of articular disease, I venture to

present a few observations, the result of an attentive examination of parts of them under the microscope.

A question, it is well known, has been agitated, as to whether articular cartilage is extravascular or not; Cruveilher, Velpeau, and Key, espousing the former doctrine, and maintaining that it is a mere epidermic crust endowed with no organic life, and hence unsusceptible of disease.

Sir B. Brodie and Mr. Mayo support the opposite opinion. Sir B. Brodie supports his views by argument principally, and by observation of vessels containing red blood, extending from a diseased bone into cartilage covering it. Mr. Mayo notices the same circumstance, and refers to preparations, now in the Museum of King's College, London, and of which he has given representations in the nineteenth volume of the Society's Transactions. These specimens I have examined with great care, but, so far as I can observe, they exhibit nothing at all satisfactory on the subject.

There is some injection on the edge of the cartilage of the condyle of the femur, in one of the preparations, and a shred of lymph is adherent, apparently at one point, to the surface of the cartilage. Vessels filled with injection may or may not exist in the cartilage, but this can only be ascertained by having thin slices made, and putting these under a good glass.

I have been able to demonstrate the existence of vessels most undeniably, in the articular cartilage of several diseased joints, and present a sketch of one portion, plate 1, fig. 3. It will be observed that the vessels run straight, in parallel lines, from the injected membrane of the bone. Many of these are joined at their further extremity in the cartilage, thus forming long loops. The possibility of cartilage being acted upon, nourished, absorbed, and repaired by its own vessels, must thus be admitted. In fact, in many of the specimens in my possession, lymph is deposited on the surface of ulcerated cartilage, and injected vessels can be traced passing into this lymph.

Under circumstances favourable for it, solutions of continuity in cartilage appear to be repaired, without, however, much reproduction of the tissue.

It would appear that ulcerative absorption of cartilage occurs in three forms:—

First. In consequence of disease of synovial membrane, which becomes much swollen, and to which processes of adven-

titious tissue are superadded, the cartilage is removed where it is encroached and pressed upon. The prolongations of the membrane, in a highly injected state, as well described by Mr. Key, fit most accurately to every crevice of the breach of surface in the cartilage. At first there is no union of the surfaces, the membrane being merely accurately adapted and closely applied to the ulcerated surface. Frequently, however, as the disease advances, adhesions form betwixt the vessels of the synovial membrane, and those proceeding from the medullary web. An adhesion of considerable length is often formed betwixt the synovial surface and the articulating end of the bone.

Second. Absorption of cartilage seems often to arise from swelling and intense vascularity of the tissue connecting it to the bone. This cellular tissue is scarcely demonstrable in the healthy condition of parts, any more than is the vascularity of the articular cartilage; but it becomes most remarkably developed in a state of disease. The cartilage is, in consequence, loosened and thinned; at first, apparently, by interstitial absorption. Then it becomes perforated, and an ulcer, of greater or less extent, with thin undermined edges, is presented. In consequence of disease of the interposed tissue, the cartilage is sometimes thinned, and ultimately detached in flakes; forming, in fact, sequestra of the tissue.

Third. Lastly, cartilage still firmly adherent to the subjacent bone, is permeated by vessels communicating with those of the bone, and ulceration proceeds from the free surface. The cartilage, very often previously swollen and softened, is gradually and irregularly thinned; the bone is exposed, and is finally acted upon also, by ulcerative absorption. The ulcerative surface is generally coated by a layer of organized lymph. More than one form of the ulcerative process may sometimes be observed in the same articulation.–*Ibid, Feb.* 1841, *p.* 130.

87.—*Some Remarks on the Motion of the Blood-Globules.* By W. Addison, Esq.—[The following interesting remarks are extracted from Mr. Addison's interesting papers in the Medical Gazette. They were penned with the microscope before him:—]

When a particle of salt is applied to the web of the frog's foot, the current of blood in the capillaries within its influ-

ence is retarded; the globules seem to have some difficulty in getting on; they are pushed and heaped together, and the vessels appear somewhat gorged. When the action of the salt is more considerable, the vessels are more enlarged, and the globules are quite stationary. After a short time the globules in some of the smaller capillaries, where the salt has had only a feeble effect, begin to move more quickly, seeming to answer an impulse from behind, and a number of them may be seen to make a sudden rush through a capillary; then, for a moment or two, the vessels appear quite empty of globules, and then another lot rush through with great rapidity; next, without any apparent reason, they hold back, and are heaped together for a moment; again the channel of the vessel seems suddenly to admit them, and they hurry through it in the same manner.

On examining the web two days afterwards, one or two inflamed or enlarged red vessels were seen by the naked eye, produced by the action of the salt: the web was placed under the microscope, and the following notes penned at the time:—

In some of the larger capillaries, or smaller veins, *i. e.* in some of the larger vessels seen in the field, there are a great number of globules, and it is quite extraordinary to observe the difference in movement between these round speckled globules, and the oval ones; the blood globules pass in a continued stream, while, in the same fluid, in the same vessel, are a great multitude of other (lymph) globules, which do not move, or do so very sluggishly: every now and then they move slowly, apparently urged on by the repeated knocks they receive from the blood globules. It would appear that after the capillary vessels have been acted upon by the salt, that the round (lymph) globules accumulate in an unusual manner, and the blood globules repeatedly slide over and knock against them. In some of the vessels there is a rapid stream of blood in the centre, whilst at the circumference there are many stationary round spotted globules, which do not obey the impulse which urges the stream of blood, but remain or move on slowly by little starts at uncertain intervals, and with unequal pace.

The action of the salt disturbs the reciprocal action between the blood and the capillaries; under its influence the blood globules that have been passing one way in a capillary will sometimes become stationary; they are frequently seen to

oscillate to and fro, apparently hesitating which way to go, and then they very often actually pass in a retrograde manner.

It is after the disturbance or inflammation produced by the salt that the three forms of globules are seen.

I infer from these observations that the blood corpuscles, in the normal condition of the circulation, move through the capillaries with a flat surface perpendicular to the axis of the vessel; hence when the circulation is seen in the microscope, the edge of each corpuscle will be turned towards the observer, and they will all appear oblong or oat-shaped; a few lymph globules may occasionally be seen interspersed among them. When inflammation is excited, various changes take place. After the lapse of a short time more lymph globules are developed, and the blood corpuscles, instead of circulating with their flat faces perpendicular to the axis of the vessel, and the edge more or less perfectly turned to the observer, turn round and pass edgeways through the vessel, so that frequently the circular form is seen.

As the blood corpuscle in all animals has a determinate form, and as they pass singly, one after another, in the minute ramifications of the capillaries, it is probable that in a normal condition of the circulation they move along the vessel in a certain fixed mode. In the human subject the blood corpuscle is of a flat circular figure, like a penny-piece; and such a body in passing along a tube must do so either with the thin edge or with one of the flat faces in its axis; if in the former manner, only two points of the corpuscle will impinge on the coats of the capillary; if in the latter it is evident that in an elastic channel, which embraces the corpuscle, the whole circumference of the vessel will be impinged on by each passing globule; the interior of the vessel will be, as it were, scraped clean, and kept clean by every passing corpuscle.—*Medical Gazette, Jan.* 29, 1841, *p.* 690.

88.—*On the Anatomy of the Aponeurosis of the Muscles of the Eye.* By M. Bonnet.—In a letter to the Academy of Medicine at Paris, M. Bonnet states, that there is a fibrous capsule lying between the globe of the eye and the layers of fat in the orbit. His researches explain scientifically the occasional persistence of the action of the muscles of the eye,

after their division in the operation for the cure of strabismus. This capsule is concave and open in front; it is inserted into the anterior extremity of the optic nerve; surrounds, without being in actual contact, the two posterior thirds of the eye, and terminates in the eye-lids, which are its prolongations. The recti and oblique muscles pierce it to reach the eye; they form strong adhesions with it, and have thus two insertions, the one into the sclerotic, and the other into the fibrous capsule. In cases where the persistence of squinting remains after operation, the anterior insertion (or that into the sclerotic) has alone been divided, the muscle still continues to act to a certain extent on the eye, from that in the capsule still remaining entire.

To shew the capsule, remove the globe of the eye, and cut the muscles and optic nerve as near to the sclerotic coat as possible. The capsule is then observed, and the muscles are seen to pierce it. The adhesions which the muscles contract are so fine, that in pulling them by their posterior extremity, they break rather than yield their attachment to the capsule. —*Edinb. Monthly Journal of Med. Science, May* 1841, *p.* 376.

89.—*Uses of the Spleen.* By D. G. Dermott, Esq., Lecturer on Anatomy and Surgery.—[The following ingenious theory is reported from Mr. Dermott's Lectures on Anatomy.]

The spleen being made up of vessels, is necessarily a reservoir of blood; it is very spongy and compressible in its texture, and is set between the cul-de-sac of the stomach and the parietes of the left hypochondriac region; consequently when the cul-de-sac is distended with food, it must be considerably compressed between the distended cul-de-sac and false ribs. The splenetic artery will be also particularly compressed, as it is entirely in the fissura longitudinalis of the spleen.—Hence the blood, which would under any other circumstances have entered the spleen freely, is prevented in a great measure from so doing when the stomach is distended, and instead of being directed through the splenetic artery, it is determined in greater quantities to the other branches of the cœliac axis; that is, it is carried by the hepatic to the liver, and by the coronary artery to the stomach.

These two viscera being then under a state of excitement in consequence of the presence of the food and chyme in the

stomach and duodenum, whereby the blood is more readily determined to them, which blood would, if the spleen were not compressed, and if the stomach had been collapsed, have gone to and circulated through the spleen.

Thus we see the reason why the three arteries supplying the spleen, the stomach, and the liver, shall arise from one axis—and why also the pancreas and duodenum are supplied with vessels from the splenetic artery before it enters the spleen, and from the hepatic artery. Thus *the spleen* is a source of irritability to the stomach, liver, pancreas, and duodenum.

Although the hepatic artery brings arterial blood to the liver, and the distinguishing constituents of the bile are not produced from arterial blood but from venous, still a greater quantity of arterial blood passing to the liver will be the means of increasing the action of the venous secreting vessels (the vena portæ), inasmuch as it is the arterial blood which supplies the liver with irritability, or that principle which is the proximate cause of organic action.—It may be conjectured, too, that the elastic coat of the spleen may possibly aid the effect of the distended cul-de-sac of the stomach, in compressing the vessels of the spleen.—2ndly. The spleen is not only a great reservoir of blood when the stomach is not distended and excited by food, but in consequence of the tortuousness of its vessels, their minute divisions and the immense predominancy of the venous vessels over the arterial, the blood must circulate slowly through the spleen, and the spleen must be a great manufactory (if I may be allowed the expression) of venous blood, which blood flows through the splenetic vein, and along with that from the other branches of the vena portæ is carried by the vena portæ to the liver, where there is separated from it by the secreting power of the acini the constituents of the bile.

By the spleen more venous blood is made, and more carbon is thrown out of the system by the liver; the bile I believe would be found to be more in quantity in an animal with a spleen, than in an animal without one.

I consider that the uses of the spleen are clearly pointed out by reason, guided by anatomy, and I believe that no other essential uses will be discovered to be attached to the spleen, than those that I have now mentioned.—*Med. Times, April* 3, 1841, *p.* 6.

D. I. ROEBUCK, PRINTER, 23, BANK STREET, LEEDS.